



Freight Farms Post-Sale Service Pricing

Major Qualifying Project



Authors:

William Alves
Anthony Dolphin
Andrew Reed

April 2013

Submitted to:

Project Advisors: Prof. Frank Hoy, Prof. Jerome Schaufeld
Sponsor: Brad McNamara, Co-founder, Freight Farms

Table of Contents

Authorship.....	4
Acknowledgments.....	6
Abstract.....	7
Executive Summary.....	8
1.0 Intro	10
2.0 Background.....	12
2.1 Freight Farms.....	12
2.2 The product	13
2.3 Limitations of Freight Farms	14
2.4 Food Industry	15
2.5 Hydroponic Industry	16
2.6 Competitors	16
2.7 Pricing	19
2.8 Service Details	20
3.0 Methodology	22
3.1 Meetings.....	22
3.2 Tour.....	23
3.3 Background Research	23
3.4 Process to Determine Price	24
4.0 Analyzing Food Distribution Channels.....	25
5.0 Structure of Service.....	27
5.1 Flat Monthly Fee versus Hourly Rate	28
5.2 Basic and Premium Service versus One Standard Service.....	29
5.3 Annual Contracts versus Month-to-Month Contracts	30
6.0 Why to Choose Freight Farms	31
6.1 Freight Farms Compared to Traditional Farms.....	31
6.2 Why Customer Should Pay for Service	32
7.0 Profitability of Freight Farms to Customers	34
8.0 Cost to Provide Service.....	35
9.0 Value of Service to Customer	36
9.1 Determining Value with Customer Results.....	36

9.2 Using an Experiment to Determine Value	37
10.0 Recommendations	38
10.1 Service Structure	38
10.2 Pricing the Service	40
10.3 Mechanical Service Representatives.....	41
10.4 Additional Service Features.....	42
10.5 Freight Farms Entrance into the Food Distribution Channels.....	43
10.6 Name the Service	44
10.7 Alternative Approach	45
11.0 Conclusions.....	46
References	47
Appendices	50
Appendix A- Potential Profitability of Freight Farms to Customers	50
Appendix B- Tracking Sheet for Customer	51

Authorship

1.0 Intro-	Anthony Dolphin
2.0 Background	
2.1 Freight Farms-	Andrew Reed
2.2 The product-	Andrew Reed
2.3 Limitations of Freight Farms-	Andrew Reed
2.4 Food Industry-	Andrew Reed
2.5 Hydroponic Industry-	William Alves
2.6 Competitors-	Anthony Dolphin
2.7 Pricing-	William Alves
2.8 Service Details-	William Alves
3.0 Methodology	
3.1 Meetings-	Anthony Dolphin
3.2 Tour-	Anthony Dolphin
3.3 Background Research-	Anthony Dolphin
3.4 Process to Determine Price-	William Alves
4.0 Analyzing Food Distribution Channels-	Andrew Reed
5.0 Structure of Service-	William Alves
5.1 Flat Monthly Fee versus Hourly Rate-	William Alves
5.2 Basic and Premium Service versus One Standard Service-	William Alves
5.3 Annual Contracts versus Month-to-Month Contracts-	William Alves
6.0 Why to Choose Freight Farms	
6.1 Freight Farms Compared to Traditional Farms-	Andrew Reed
6.2 Why Customer Should Pay for Service-	Andrew Reed
7.0 Profitability of Freight Farms to Customers-	William Alves
8.0 Cost to Provide Service-	Andrew Reed
9.0 Value of Service to Customer-	William Alves
9.1 Determining Value with Customer Results-	William Alves
9.2 Using an Experiment to Determine Value-	William Alves

10.0 Recommendations

10.1 Service Structure-	William Alves
10.2 Pricing the Service-	William Alves
10.3 Mechanical Service Representatives-	William Alves
10.4 Additional Service Features-	William Alves
10.5 Freight Farms Entrance into the Food Distribution Channels	Andrew Reed
10.6 Name the Service-	William Alves
10.7 Alternative Approach-	William Alves
11.0 Conclusions-	Anthony Dolphin

Acknowledgments

First, we would like to thank our project sponsor Brad McNamara for giving us the opportunity to complete this project with Freight Farms. His willingness to meet regularly and work closely with us enhanced the value of our project.

Next, we would like to thank our project advisors, Professor Frank Hoy and Professor Jerry Schaufeld. Their guidance, direction, and advice aided us through our project and made everything we did possible.

Finally, we would also like to thank Professor Chickery Kasouf and Professor Alan Hoffman for taking the time to meet with us and give us guidance for our project.

Abstract

The goal of our project was to develop a post-sale service to be offered to Freight Farms' customers that would aid them in the hydroponic growing process and assist them with any issues that may arise enhancing the value of their product. We did this by determining how to structure the offered service and the price that Freight Farms should charge its customers. In addition, we offered additional recommendations that could be implemented that will greatly increase the value of the service to the customer.

Executive Summary

Freight Farms are high-volume crop production units made from up cycled shipping containers, created by Brad McNamara and Jonathan Friedman (Freight Farms). Their mission statement says “Freight Farms creates local food supply at a commercial volume. Freight Farms introduces a scalable farming platform that can be operated anywhere. By up-cycling shipping containers into a source for high yield crop production, Freight Farms make food accessible in environments where farming has never been possible.”

Our goal as an MQP team was to discover a way to price the post-sale service Freight Farms will be providing its customers. Our major areas of research consisted of finding a way to structure and price the service, show why the service would be useful to the customer, and show how the service could be profitable for Freight Farms. We also looked into the food distribution channels and analyzed who Freight Farms should be selling their product to. We used our research in these fields to come up with an effective way to price the service, and also made sure that it benefitted the customer and the company. Meeting with the co-founder of Freight Farms weekly, we were able to garner information about the company and the product allowing us to complete our project.

Through our analysis of the information that we gathered we were able to successfully recommend a price range for the service based on the cost of the service to the company and the potential profits that customers could make using the Freight Farm and offered service. We also gave various recommendations to the company about things they should add to the service and

who they should market it too. We believe that our recommendations for this service will add value to the Freight Farm product and enhance the profitability of the company.

1.0 Intro

Freight Farms is not a usual food distribution company. They have taken the demand for locally grown produce and revolutionized the way it is distributed. They have found a way to build a hydroponic farm within a shipping container, which brings endless new possibilities to where and when food can be grown. By utilizing the sophisticated Freight Farm and receiving hydroponic advice from the Freight Farms team, anyone can grow produce anywhere, taking the market for locally grown produce to new heights.

Freight Farms started with one simple idea; bring locally grown produce to local grocers so that fresh vegetables can be sold steps away from where they are grown. Brad McNamara, the owner and creator of Freight Farms, graduated from Northeastern University and came up with this idea to build hydroponic farms inside of shipping containers. This makes it easy to transport the farms and also makes them environmentally friendly by growing all types of leaf vegetables for local consumption without taking up farming land and soil. Freight Farms is looking to revolutionize the way farm foods are grown and distributed so that people can get the taste of the freshest produce possible.

The Freight Farm itself is an interworking of different systems working together to create a hydroponic farm inside of a single shipping container. The entire system is run off of a single tablet that is connected to the water irrigations system, the heating and cooling system, the Ph levels and even the grow lights. Everything can be accessed, monitored and changed if need be all through the tablet. This takes many complex systems and puts them together into one simple system that makes it extremely user friendly.

Once the customer has bought a Freight Farm, they will then have the option to opt for a service where they have access to a hydroponic specialist. This specialist will be available to answer any questions about the Freight Farm; including growing advice, why a crop may be failing, and help to re-calibrate their system. This service will be extremely efficient due to cameras inside the Freight Farm that the specialist can use to view the crops and screen share with the tablet device that runs the system. The service is in place to ensure that Freight Farms' customers receive the maximum benefit from their unit.

Our project seeks to determine an optimal price for this service that will provide maximum benefit for both the customer and the company. We will also offer our recommendation for how the service should be structured by comparing the advantages and disadvantages of different ways to structure the service. We will also be giving our own recommendations of features that should be added to the service to enhance its value. Finally, we compared how customers in different areas of the food distribution channel would benefit with the Freight Farm.

As the WPI MQP for Management Engineers states it, "An MQP is typically designed for a real, functioning business. The students strive to produce a solution to an actual management need by applying the skills, methods, and knowledge obtained through course work. An MQP may address a variety of areas; process flow analysis, automation, small business optimization, and/or process re-engineering (Management Engineering)."

Our MQP works with an automated process that controls everything from the temperature inside of the Freight Farm to the amount of water the plants are receiving. We are also looking for the most optimal way to offer a service package that the customer can use if the system goes down for any reason. On top of assisting any problems the automated system may encounter, we

are helping optimize the service package, so that everyone who purchases a Freight Farm will have the security and help of hydroponic expert's assistance at a moment's notice.

In order to determine the optimal price that Freight Farms should charge for this service, the key research questions that we needed to answer were:

- What is the cost to Freight Farms to provide this service?
- What is the value of this service to the customer?
- How much profit can a customer expect to make from a Freight Farm?

2.0 Background

2.1 Freight Farms

“Grow Food Anywhere” – that’s how Freight Farms describes itself (Freight Farms). In 2012, two Northeastern graduates, who wanted to help grow produce in urban areas, started Freight Farms. The name of the company also describes the company’s philosophy and product as:

“...high-volume crop production units made from up cycled shipping containers. Freight Farms are equipped with the latest harvest technology and cutting edge growing equipment necessary for commercial scale agriculture. Using real-time digital monitoring and automated growing methods, this advanced system allows users of all levels to manage crops with ease (Freight Farms).”

By designing a freight-shipping container to accommodate a farm, Freight Farms can grow over three hundred heads of lettuce each week and copious amounts of basil. These containers provide a consistent year round environment in which to grow produce.

2.2 The product

The product is a shipping container that is designed on the inside to be a self-sustained farm. All aspects of the farm are controlled by a tablet device creating one central hub for the unit. Because the elements are controlled, disease and blight will be eliminated and the farm product will be consistent week after week. The shipping containers is very versatile, and can be shipped anywhere in the world - giving access to fresh produce to those parts of the population that may not have had it before. All of the produce is pesticide free - or organic. Companies are attracted to the concept because they can grow plants or produce themselves and sell it year round.

The outside of the freight container is 40 feet long by 8 feet wide by 9'6 tall. Inside the farm you will find a user-friendly tablet that controls everything that goes on. The farm includes an air conditioner/heater that will control the climate for the farm. You then will find a 300 gallon tank of water that is attached to the irrigation system. There are 240 towers hanging in the Freight Farm that the plants grow out of. Each one contains 15 plant growing sites which create a total of 3600 plant sites within the Freight Farm. On the other side of the freight container there is a seedlings grow center where you start your crops. Once your seedlings have reached the appropriate height, they are ready to be placed in the growing columns. These are 8-foot columns that are filled with growers moss; the moss is taken out of the column and filled with the seedlings. Once lined with seedlings they are hung back up facing the lights in the farm. The water is then turned on so that they are properly watered. See images below to get a better understanding for a better look at the inside of a Freight Farm (McNamara).



Figure 1 Basil Growing Inside of a Freight Farm

Currently, Freight Farms offers a farm for leafy green plants. These leafy green products grow in 5 week cycles. The company is working to develop different models for future use that will be able to grow all different types of produce. These new designs will further diversify the company and provide customers with many more options, which will dramatically increase their market share. The more variety of produce that can be produced from Freight Farms will directly correlate to how many units they can sell.

2.3 Limitations of Freight Farms

While Freight Farms is trying to change the plant world, these farms face certain limitations. First, the product itself is a sizeable investment and customers will have to be sure

the product is worth it for them to buy. Second, the market itself creates a limitation because of the number of people that enjoy supporting their local markets and farms. The size of the containers can also limit its use because the product is large; if an empty lot is not available in a city or town, product placement becomes an issue. Lastly, the containers rely on continuous lighting to grow the products, and therefore use a lot of electricity, which is comparable to the cost of running a small house.

2.4 Food Industry

Farmers have been the sole suppliers of produce to the food industry. Therefore, it is difficult to get a sense of the interest those farmers would have in using a Freight Farm. Then you must determine if food suppliers and grocery stores would be interested in using the Freight Farms. Currently, the average price of a head of lettuce at a grocery store is \$1.50. Since there is a tested market for lettuce, it is safe to assume that people will buy the lettuce from a freight farm. Providing produce, such as lettuce, to areas that cannot typically grow produce will lower the price for everybody involved in the process due to decreased shipping costs. For instance, northern farmers, such as those in New England, who cannot grow produce year round, will now be able to grow all year. Thus, they will be able to sell their produce to local supermarkets year round. The local farmer will realize a profit and the customer will be able to purchase locally grown products year round. Individual supermarkets could also invest in a Freight Farm. This would help their profit margin by avoiding the middle man and growing produce themselves. This would increase availability for the customer year round and, in the end, provide a cheaper product for the customer by avoiding shipping costs or fees from the farmer.

2.5 Hydroponic Industry

Hydroponics is defined as “The process of growing plants in sand, gravel, or liquid, with added nutrients but without soil.” Soil is not essential to plant growth but acts as a reservoir for minerals and nutrients that the plant feeds off to grow. Hydroponics works because it provides these essential minerals and nutrients to the plant directly, leaving no need for soil. Almost any type of plant is able to grow through the use of hydroponics. It offers many advantages to traditional growing including: no need for soil, lower water costs, lower nutrient costs, easier to harvest, no pesticides, and a controllable environment with high yields. The only major disadvantage to hydroponics is that failures in the system being used will lead to plant death very quickly and there is much less room for error opposed to traditional farming (Hydroponics).

The Hydroponic Industry has boomed in recent years. Estimated to be a \$300-\$400 million industry just a few years ago, a recent estimate by the Progressive Gardening Trade Association believes it is now a \$1 billion industry. This is still just a fraction of the overall gardening industry, which is estimated to be a \$50 billion industry by the Garden Writers Association (GWA). The advantages of hydroponics allow it to offer more dynamic products at more competitive prices than traditional farming, which allows the hydroponic industry much more room for growth within the extremely large gardening industry (The Hydroponic Industry).

2.6 Competitors

Freight Farms is a unique company with revolutionary new idea, therefore they do not have any direct competitors. There are no companies that build farms within freights, sell them as a whole unit for the customer to manage themselves, and then provide ongoing service to maintain that freight farm. However, there are other companies that will be competing for the same business as Freight Farms. In addition, greenhouses are a competitor to Freight Farms

because they allow farmers to grow later into the season in certain areas, which is one of the benefits that Freight Farms provides its customers. However, greenhouses lack the mobility of Freight Farms, occupy a much larger area, and are less energy efficient.

One of the main possible competitors for Freight Farms is a company called Podponics. Podponics, much like Freight Farms, is a farming company that answers the growing consumer demand for locally grown food by producing in urban centers. They use an approach that does not require arable land, making Podponics the closest direct competitor of Freight Farms. Although the Platonic system does not offer mobile farms, they do offer fresh produce year-round at or near the point of consumption. Their proprietary system reduces cost, improves quality, and increase local jobs while answering the strong and growing demand for locally produced natural whole foods. As of right now, Podponics is successfully producing multiple lettuce products; such as lettuce, Arugula, Black-Seeded Simpson, butter head, Green Oakleaf, Red Oakleaf, Romaine, micro-greens, Cressida, and watercress. All of these products are grown locally by Podponics, and sold locally to customers. By growing lettuce at or near the point of consumption Podponics reduces the nation's dependency on foreign oil, reduces carbon emissions, eliminates pesticides and fertilizer runoff, conserves water and land, all while producing healthy nutritious food generating investment in creating jobs.

To continue to be productive Podponics has developed a sustainability mantra. This mantra measures their progress by using the triple bottom line: people, plants, profit. People- By creating valuable jobs and opportunities and providing access to healthy nutritious whole foods in cities. They also support schools, nonprofit and citizen organizations in an attempt to provide more for their fellow citizens. Particularly by giving children access to fresh

produce, while also teaching them that food must be grown and it does not come from the supermarket.

Plant- Each aspect of what Podponics does begins with a central focus on protecting the environment and preserving the valuable natural resources. This includes building their pots out of recycled shipping containers, recycling the water they use inside their pods, and preventing fertilizer runoff and employing next-generation lighting. Podponics is always looking for greener ways to run their business.

Profits- Profits provide the capital needed to grow, expand, reinvent and create jobs and economic opportunities for Podponics. Although Podponics is a for-profit operation, they are guided by deeply held values and beliefs that balance the need for profit with a concern for their fellow citizens in the planet.

It would seem that Podponics shares many of the same concerns, procedures, and aspirations as Freight Farms. However, the main difference is that Freight Farms sells each individual Freight Farm to different people/companies for them to maintain and operate themselves and then sell locally grown produce. Podponics builds full hydroponic farms in rural areas, grows produce themselves, and sells the locally grown produce to local markets to be sold locally. Freight Farms gives the distributor the ability to cut out the middle man, which Podponics would seem to be (Podponics).

Podponics is not Freight Farms only concern, however. Freight Farms sells their containers directly to the distributor; there is the chance that the distributor will not be interested in growing and selling the produce. This is where local farms can become an issue. Most distributors become distributors because they want nothing to do with the actual process of the grow cycle. They are only interested in getting produce from one location to the other to be sold

so they can make a profit. Local farms do not put the pressure on the distributor to grow anything; they only do the job they initially signed on to do. Farms in general are going to be a concern mainly because distributors have long standing contracts and agreements with farm owners so they can purchase and distribute food at a bulk rate. The Freight Farm initially will not be able to offer the same bulk deals that farms will be able to offer. However, the grow cycle is shorter, so the turnaround on the products is much faster.

2.7 Pricing

Three of the most common pricing methods are cost-based pricing, value-based pricing, and market-based pricing. Cost-based pricing sets the price of the good or service based on a multiple of the cost of the product to the company. For example, pricing goods at 140% of the cost would be cost-based pricing. Value-based pricing sets the price of the good based on the value the product or service provides to the consumer. This is often used when selling computer software; prices are determined based on productivity gains from time savings, regardless of cost. The final of the three common pricing methods is market-based pricing. Market-based pricing determines what to charge for a product or service based on what others charge for a similar product in the industry (Berry, 2006).

According to author Tim Berry, one very common error that entrepreneurs make in start up businesses is pricing their product or service too low. Many entrepreneurs feel that they need to price their product lower than the competition. They believe if they have lower prices they will sell more goods. However, people often associate lower price products with lower quality products. Berry believes you should use pricing as positioning and not be afraid to price your product higher than the competition if you are offering a higher quality good (Berry, 2006).

When pricing a service, the same principles apply as when pricing a good except it is much more subjective. Two of the most common pricing methods are charging an hourly rate or a flat monthly fee. Osteryoung says, "Customers want a fixed rate, entrepreneurs want an hourly rate. It's a question of who is going to bear the risk. If I charge a flat rate, I am bearing the risk." When charging a flat fee, you will have a guaranteed source of income every month, but you may end up losing money on the service if customers use the service more than you intended. Another important piece to consider within a pricing strategy is whether you will use variable pricing or practice a fixed price from customer to customer. Variable pricing has the potential to bring in higher profits, but it can create mixed feelings and resentment from customers receiving the higher rate (Wasserman, 2009).

Every company large or small should monitor the profitability of their services every month. This means they must determine the direct costs of providing the service and allocate a portion of the business' fixed costs and compare that to the revenue that it is generating. Osteryoung states, "If there is any mistake I see entrepreneurs make, it's that they don't spend enough time going over their financial statements." Companies should also continue to test new prices, offers, and benefits to customers to see what works best at maximizing profitability and bringing in new customers (Wasserman, 2009).

2.8 Service Details

Freight Farms will be offering customers a service plan they can opt to buy after the three month free trial that comes with the purchase of the Freight Farm. This service plan will consist of a hydroponic expert that will give growing advice and help the customer identify problems with their plants. The hydroponic specialist will be able to identify problems by using screen sharing with the customer's tablet device and utilizing cameras on the inside of the Freight Farm

to look at the crops. Specialists will also be able to give customers advanced growing techniques that can raise the quality of the crops. This could consist of techniques that change the taste, color, and size of the crops. This hydroponic specialist will likely be available to customers during regular business hours.

The Freight Farms support service will greatly increase the probability of success and all consumers will be strongly encouraged to purchase the service. The service will include system training, master gardener support, remote access, grower's workshops, and resource management. The system training will provide a system and component orientation following the unit installation. Master gardener support is recommended for all new growers, as it will provide a primary crop cycle assist helping you with your growing. The remote access allows Freight Farms service experts to access and monitor your system from anywhere around the world. The grower's workshops will provide growing techniques and tips for growers of all levels. The resource management will monitor system levels and production rate and ship you supplies when you need them allowing the customer to focus on growing their crops. As the grower continues to hone his skills the support that is always needed will be there at the push of a button on the tablet. This service will be recommended to all people buying a freight farm due to the complexity at first of the system. The service will give access to hydroponic experts that will be able to solve problems in a timely manner and not waste time. Having the ability to fix any problem is a huge help for any customer (Freight Farms).

3.0 Methodology

3.1 Meetings

Throughout the course of this project our group had multiple meetings with professors and representatives from Freight Farms in order to gain information, structure our project, and receive insight into the direction we may want to take our project. This included our weekly meetings with Professors Hoy and Schaufeld throughout the year. The professors worked with us to give us guidance on the direction of our project, but allowed us the freedom to complete the project in our own way. We worked with them to go above and beyond what was expected by bringing new ideas to the table that Freight Farms could possibly incorporate into their business plan.

We also had multiple meetings with our project sponsor, Brad McNamara co-founder of Freight Farms, throughout the course of our project. Freight Farms is a relatively new company and has multiple areas for it to grow and develop, so it was imperative to stay informed on the recent developments of the company. During our meetings with Brad we were looking to gain information that would help us reach our final recommendations for Freight Farms. First we needed to learn about Freight Farms as a company. This involved learning exactly what their product was and how their business plan was going to work. We then learned what the post-sale service model was and how the service would be used. We worked closely with Brad to get a good understanding for the company so we could create recommendations that matched the direction he was looking to go, while also giving him alternative ideas.

Another notable meeting we had was with Professor Chick Kassouf. This meeting helped us get a better understanding of how we could develop and price our service model. Professor Kassouf was recommended to us as someone with a great knowledge of pricing. He helped us

understand all the factors that go into pricing something and gave us advice on how we should attack our project.

Finally, we met with Professor Alan Hoffman, a mechanical engineering professor at WPI. Since all three members of our group have a concentration in Mechanical Engineering, we thought it would be a good idea to get the perspective of a mechanical engineering professor. He gave us his opinions on the project and helped us insure we were covering all aspects.

3.2 Tour

In order to really understand the product, we toured a Freight Farm and saw firsthand how everything worked. This helped us learn how the grow cycle worked from beginning to end and how the automated system controlled everything inside the container. We got a much better understanding of what each part did and how they interacted with each other. We also collected information about how long each grow cycle would take, how many crops will be yielded from each grow cycle, and the number of grow stations within the container. Gaining this in depth understanding of the product was crucial to helping us complete our project.

3.3 Background Research

Due to the uniqueness of the idea of Freight Farms, we decided to do a lot of initial background research into multiple different areas. Some of our areas of research included the food industry, hydroponics, how pricing works, and competitors of Freight Farms. On top of this, we also attempted to learn as much as we could about Freight Farms as a company, the Freight Farm itself, and the post-sale service Freight Farms wanted to offer to its customers. We also wanted to determine if the idea is feasible and potentially profitable and if there are enough people interest in the idea behind Freight Farms to create a legitimate market for it. We spent

some time reading books on pricing models that Professor Kassouf allowed us to borrow and found internet sources to give us a good base knowledge in order to understand how pricing models work.

3.4 Process to Determine Price

In order to determine how the post-sale service would be structured and the price that customer would be charged, we took various steps along the way. First, we looked at the advantages and disadvantages to a few different ways of structuring the service. We were sure to look at this from both the company's and the customer's perspective. After reviewing the advantages and disadvantages, we made recommendations of how the service should be structured. This was done first because you cannot price the service until you know how it will be structured and what features it will entail.

Next, we determined the potential profits that a customer could make from their Freight Farm. We used information about how much different products could be sold for, estimated operating costs, and estimated yield to determine the estimated net income, payback period, and return on investment. This information was used to create a price ceiling for the service cost.

We then determined the cost to Freight Farms to provide the offered service. This included the annual salary of the hydroponic expert that would need to be hired, as well as overhead costs. This information was used to create a price floor for the offered service.

Finally, we created an excel document that Freight Farms customers could use to track data about the Freight Farm. This information includes how many hours they spend on their Freight Farm, the amount of times they needed it serviced, and the type of crop they are growing and the output they harvested. This information was used to determine the actual value of the

service to the customer. Our hopes were that this number is between the price floor and price ceiling and then would be a good price to charge for the service.

4.0 Analyzing Food Distribution Channels

At this point, Freight Farms is trying to sell its farms to anyone that is willing to buy them, but what are the options for the company as it tries to move forward. An important factor to consider in moving forward is the manner in which food is distributed in the United States. Food distribution in the United States is complicated because there are many different players in the chain. There are people who produce, manufacture, transport, and distribute. By the time a product is placed on a grocery store shelf, it has traveled countless miles and has been handled by many different people in the chain. The role of each person in the food distribution chain has to be evaluated because each is counted on to make sure that the food stays fresh. By the time the product is purchased, the manufacturer, broker, distributor, and retailer have all determined it to be the best product possible and determined that it will make money for every group involved in the sale.

First, one must analyze how food travels. Once food leaves a farm, it travels to the food distribution warehouse. These warehouses are the middlemen for farms that are trying to get their products out into the market. There are also food brokers who act as a middleman but never actually come into possession of the goods and just direct farms where to go with their products. Food wholesale distributors are very similar to distributors, but they do not perform as many services, such as stocking and managing retail shelves. Some larger companies have their own distribution centers such as Wal-Mart and Safeway. The farmers and manufacturers will deliver directly to those centers and there will be no middlemen. Then these centers will

distribute the products to each individual store. This system accounts for roughly 34 percent of distribution centers in the United States (Harris, et al.).

A new product can take several different paths before reaching the consumer. There are many options available to the farmers to get their food distributed; each farmer may utilize a different distribution route. Some farmers choose to sell their products at a farmers market where they will be able to reach the customer directly. Other farmers use complicated distribution channels with several distributors involved. Many farmers do not want to interact with their customers or do not have the time to do so. For these farmers, the only way to obtain distribution of their produce is to use food distributors and brokers. Although this can be less profitable for the farmer, it makes it easier to sell and distribute to the potential customer, and the farmer can reach more customers.

Most foods go through a distribution channel to reach the end consumer, whether that consumer is a shopper in a retail grocery store or at a fine restaurant. The most common distribution channel is from farmer to broker to distributor to retailer. This path can change greatly depending on the product, the target markets, and the manufacturer. In general, most fruits and vegetables have a smaller channel because they need to reach the end customer fast.

Every farmer must understand how the distribution channels work in order to be successful and must have a plan for how they are going to distribute their products. Pricing is the most critical part of the process. If a product is priced too high, consumers will refuse to purchase the product, and the farmer will not make money. Every farmer must focus on the customer in the end; the customer is all that matters. If the customer refuses to purchase the product because it is priced too high, the farmer will not be successful.

Next, it is important to analyze the financial gain that each person in the channel realizes when a customer ultimately purchases a product. Let's examine how a product comes to the price that is set at the supermarket. First the farmer has a product that costs \$.49 for the cost of the goods to grow and maintain the product. There is then a 30 % mark up for the farmer, so his item is sold to the distributor for \$.64. Taking into account the 5% mark up of the broker if he is involved, the final revenue for the farmer is \$.6 per item sold. The distributors will then have another mark up and make the product cost \$.74 before being sold to a retail market. The retailer then mark up the product another 35%. This makes the cost \$.99 for the end customer.

The price essentially doubles from the \$.49 cents cost to manufacture to the final retail price of \$.99. The original cost of the item affects every part of the distribution channel. This example also demonstrates that the retailer makes the most net profit off of the product and not the farmer or manufacturer.

5.0 Structure of Service

The service offered by Freight Farms should be designed to generate the most profit for company and value to the customer. In order to do this the advantages and disadvantages of the different ways to structure the service must be explored. The different aspects of the service that must be defined are whether to:

- Charge a flat monthly fee versus an hourly rate
- Have a basic and premium service versus one level of service
- Create annual contracts versus month to month contracts

5.1 Flat Monthly Fee versus Hourly Rate

First, Freight Farms must decide whether to charge customers a flat monthly fee for the service provided or charge customers an hourly rate when they use the service. The charts below list the advantages and disadvantages to both Freight Farms and the customer of charging a flat monthly fee versus an hourly rate:

Flat Monthly Fee			
Freight Farms		Customers	
Advantages	Disadvantages	Advantages	Disadvantages
<ul style="list-style-type: none"> • Guaranteed monthly payments • Encourages service use which leads to better customer crop yields 	<ul style="list-style-type: none"> • Customers may over use service • Makes pricing service more difficult 	<ul style="list-style-type: none"> • Consistency of service charge • Can use service as often as necessary 	<ul style="list-style-type: none"> • Will have to pay even if service is not used • Company could set low service capacity

Hourly Rate			
Freight Farms		Customers	
Advantages	Disadvantages	Advantages	Disadvantages
<ul style="list-style-type: none"> • Will get paid based on the amount of service provided 	<ul style="list-style-type: none"> • No guaranteed monthly revenue • Customer will be 	<ul style="list-style-type: none"> • Customers only charged for what they use 	<ul style="list-style-type: none"> • Will be reluctant to use service unless absolutely

<ul style="list-style-type: none"> • Makes pricing service simpler • Larger customer base because non-frequent users would not opt for monthly fee 	<p>less likely to utilize service leading to worse crop yields</p> <ul style="list-style-type: none"> • Customer will rush service rep 	<ul style="list-style-type: none"> • Non-frequent users will not have to pay for more than they need 	<p>necessary</p> <ul style="list-style-type: none"> • May wait until they have multiple questions/problems to call
--	---	---	---

5.2 Basic and Premium Service versus One Standard Service

Next, Freight Farms must decide whether to offer customers the option to choose between a basic and premium service or offer only one standard service. The one standard service would be a premium service, so the question is really whether to offer a basic service or not. In order to make this decision Freight Farms must compare the advantages and disadvantages to both themselves and the customer for each option.

Basic and Premium Service			
Freight Farms		Customers	
Advantages	Disadvantages	Advantages	Disadvantages
<ul style="list-style-type: none"> • Service will be appealing to more customers therefore increasing customers 	<ul style="list-style-type: none"> • It is more difficult to offer multiple service levels • Could lose money due to customers opting for basic service 	<ul style="list-style-type: none"> • More options to pick the service that suits their needs 	<ul style="list-style-type: none"> • More customers using service could tie up service representatives

One Standard Service			
Freight Farms		Customers	
Advantages	Disadvantages	Advantages	Disadvantages
<ul style="list-style-type: none"> • It is easier to have one standard service • Customers that want the service must pay the premium price 	<ul style="list-style-type: none"> • Fewer customers will opt for the service 	<ul style="list-style-type: none"> • All customers will be treated the same when using service 	<ul style="list-style-type: none"> • Fewer options for customers to choose from

5.3 Annual Contracts versus Month-to-Month Contracts

The final issue that must be addressed in order to define the parameters of the service is whether to have annual contracts for the customers or have them on month-to-month contracts. The tables below will discuss the advantages and disadvantages for Freight Farms and the customer for the two options.

Annual Contracts			
Freight Farms		Customers	
Advantages	Disadvantages	Advantages	Disadvantages
<ul style="list-style-type: none"> • Lock customers in for guaranteed income 	<ul style="list-style-type: none"> • Less customers will be willing to get service 	<ul style="list-style-type: none"> • Company can offer a cheaper rate 	<ul style="list-style-type: none"> • Customers are locked into contract

--	--	--	--

Month-to-Month Contracts			
Freight Farms		Customers	
Advantages	Disadvantages	Advantages	Disadvantages
<ul style="list-style-type: none"> • More customers will be willing to get service 	<ul style="list-style-type: none"> • Customers can opt out of service at any time 	<ul style="list-style-type: none"> • Can opt out of service at any time 	<ul style="list-style-type: none"> • May have to pay a higher rate

6.0 Why to Choose Freight Farms

6.1 Freight Farms Compared to Traditional Farms

There are major differences between growing on a Freight Farm and on a normal farm. The main difference is the time that it takes for plants to grow on the respective farms. On a normal farm, the time is basically doubled to grow the plants. For basil to grow to peak harvest it could take up to 12 weeks. On a Freight Farm it only takes 5 weeks until it is ready to be harvested. This is because on a farm there are only so many hours of daylight. On a Freight Farm plants are getting light 24 hours a day, which leads to the big difference between the two.

The next difference comes with how much work is required for each farm to run. On a normal farm you are not in control of light, water, or any pests that could attack your plants. This would require building of fences around the farm or have some sort of way to protect the plants. A farm also requires pesticides to be added to help the plants grow, as well as weeding and use of a tractor to plant all of the seeds. While using a Freight Farm none of that is required. The owner is in control of how much light and water a plant gets and there are no pests that

could attack the plants. There are no heavy-duty tractors or the need for any pesticides to be added. Freight Farms and normal farms have a night and day difference with how much work will be needed to maintain the farms.

Another difference is the amount of space that each farm has to grow. A Freight Farm has limited space and as of right now is only able to grow a few crops. On a normal farm there is a massive amount of space and a farmer is able to grow as many different crops as needed. The last difference between a normal farm and a Freight Farm is that to run a Freight Farm you are able to have another job. Running a Freight Farm doesn't require much time wise if you get your plants off to a good start. On the other hand running a farm is a full time job and requires endless days to make sure everything is going correctly. These are the main differences between a normal farm and a Freight Farm.

6.2 Why Customer Should Pay for Service

For a customer buying a Freight Farm the service is a critical part of being able to be successful. For the average customer that has little growing experience, this service will provide them with the knowledge they need to be able to grow the best plants possible. By having a hydroponic expert's advice at any time, there is no need for the customer to worry about what is going wrong with the Freight Farm because experts will be able to alert them of issues. The hydroponic expert will be able to identify plant diseases early on in a growing cycle and let the customer know what they must do to combat this problem. If there is an issue within the farm a mechanical expert will be at your service letting the customer know what is needed to fix a pump or the heating and cooling controls. Both of these experts will be excellent with customer service and will make a freight farm run to its best ability.

Good customer service is also going to be a large selling point for this post sales service that is offered. We have found research that shows a 9% increase in the price people are willing to pay for a product or service when they had good customer service while purchasing the product. Most companies overlook customer service, and 76% of people believe that most companies do not value or cherish their business. Freight Farms' customer service is going to be a part of the 24% that does care, which will allow Freight Farms to charge a price that will be profitable to the company and fair to their customers (Social Business Advisor).

Some of the added features that will be gained by adding the service are that customers will now be able to change the ways that plants are grown. They will be able to do this by using new techniques of hydroponics. These experts have the ability to implement techniques that maximize the profitability and the size of plants. The experts can make a higher quality product and make it so the person running the farm can do all of this and also can change the chemical makeup of a plant. This gives you the ability to change the color of a plant and can make it so the plants grow bigger than normal. The ability to catch a problem before it happens or early in the stage of the growing process can save a lot of time and money for a new customer that would not have been able to catch these on their own. These reasons give a customer the ability to grow crops without worries and give them the best chances of making money.

Lastly, buying this service assures that the customer will be happy. It gives a customer a sense of security that if something goes wrong they are not on their own. When advertising the service it must be emphasized that the service will help improve the overall quality of the farm. This can be by showing the difference between plants with and without the help of the hydroponic expert. This will make people want the service when buying a farm and creates a

selling point. Overall, the service should be bought by new customers because it will enhance their experience growing plants, give them a sense of security, and lead to greater profits.

7.0 Profitability of Freight Farms to Customers

Freight Farms are a product customers buy to produce crops in order to make a profit. In order to determine what Freight Farms should charge for their service, we first need to determine what the customer can expect to make when running a Freight Farm. We need to use the potential profit a customer can make as a factor in determining the cost of the provided service because we do not want to cut heavily into the customer's profit margins. Please see *Appendix A- Potential Profitability of Freight Farms to Customer* which shows what a customer could expect to make by successfully growing lettuce, sweet basil, lemon basil, and spinach. The price of the Freight Farms service is not included in these charts.

The amount of net income a customer can expect from a Freight Farm varies greatly depending on the type of crop they choose to grow. This is largely due to the high selling price of basil compared to lettuce and spinach. Growing lemon basil can net \$117,138 of income annually, creating a payback period for the initial investment of just over six months. At the other end of the spectrum, growing lettuce will net \$16,764 of income annually which still gives you a payback period of under four years. If growing basil, there is plenty of room within the customer's profit margin to pay a service charge that will help them with their grow cycles. If a customer is growing lettuce there is still room for a service charge.

8.0 Cost to Provide Service

We need to determine what it will cost Freight Farms to provide this service to its customers. This will create a price floor for the service. The cost to Freight Farms may vary based on how much a specific customer is using the service. The service includes a hydroponic expert that will be hired as a full time employee. We are making the assumption that one hydroponic expert will serve about 30 customers. In the future, a mechanical expert may be hired that will be there to deal with mechanical issues within the Freight Farm. This mechanical expert would likely start as contracted workers until the company started accumulating more customers. We expect the hydroponic expert to make around \$50,000-\$60,000 when she starts working full time. If this is a valued employee, which it is they will be offered benefits and have bonus too. This can add \$10,000-\$15,000 to the value of the expert. The other mechanical expert would always be a contractor because ideally he would not be needed as much. We will be using the first Farm sold as the model as how often and how much the customer will be using the service. Ideally the hydroponic expert would be able to service 20-30 customers. There would be an overhead cost of around \$3,000 for the expert's offices, tablets, Internet, etc.

There are four main costs for a company when trying to look at a service. The first cost would be the supplier's cost. This would not apply to Freight Farms because they do not have that cost. The next, as talked about in the above section would be the overhead cost. This is a fixed cost for the company that they will have to pay monthly. The office space will most likely be in the company headquarters so that would not necessary being a cost to the service to for the company. Freight Farms cost to provide this service should be approximately \$70,000 per year. This is assuming that they only have one hydroponic expert; it will be expected as the company grows that this number will grow. The number can also be expected to be larger if the

mechanical expert is used more often than expected. This could add as much as \$20,000 more to the overhead per year if there are issues with parts in the farm. Pricing of the service will be determined by the cost to Freight Farms so this is critical information going forward (Allen).

Expense	Cost
Hydroponic Specialist Salary and Benefits	\$65,000
Additional Overhead Costs to the Company	\$5,000
Total Cost to Provide Service	\$70,000
Cost Per Customer (estimated 30 customers)	\$2,333

9.0 Value of Service to Customer

Before we can determine the price to charge customers for the offered service, it is important to determine the value of service to the customer. The value of the service to the customer can be measured by crop output and saved time. These are two figures that can be easily documented by customers to give Freight Farms an accurate depiction of the real value of the service they are offering. However, initially this information is not available when Freight Farms will first be offering this service.

9.1 Determining Value with Customer Results

Once Freight Farms has several customers and has their service up and running they can determine the value of their service based on information they can obtain from the customers. First, Freight Farms should develop a system to track their customers’ crop output and hours spent running the unit. This can be done using an automated system, having customers record the data themselves, or a combination of the two.

The next step is to evaluate your customers based on their experience with hydroponics and how well they are likely to run their Freight Farm. This needs to be done so you can compare and contrast the results of different customers against customers with similar experience levels. A basic way to categorize the customers would be by putting them into three groups; beginner, intermediate, and experienced. This basic categorization should lead to much more accurate comparisons.

Finally, once you have the customers categorized and all the data of their crop output and hours logged it is time to compare. Within each category, compare the results of crop output and hours logged between customers that have the service and customers that do not. You will then have information that says how much more crops a customer produces when using the service and how much of their time they save. You then can attach a monetary value to these numbers to give you an accurate depiction of how much this service is worth to a customer.

The following Excel document should be used by Freight Farms' customers to track the hours they spent using their Freight Farm, the number of times they needed help from a Freight Farms expert, and their crop output. This sheet can be found in *Appendix B- Tracking Sheet for Customer*.

9.2 Using an Experiment to Determine Value

If you cannot use real customer results to determine the value of the service, you can run an experiment to see how much this service affects the customer's crop output and hours logged. Freight Farms currently has a Freight Farm they use for testing purposes and sell the crops they produce. They could find someone with no hydroponic experience and hire them to run the Freight Farm for a crop cycle and record their results. They could then hire someone else with no hydroponic experience to run the farm for a crop cycle after the first test subject has finished

and grow the exact same crop. One test subject would be on their own running the Freight Farm with no outside help. The other test subject would receive advice from the Freight Farms Team in a similar manner to what the service would entail. You then compare their crop outputs and logged hours running the farm to see how much the hydroponic advice helped. Freight Farms can then sell the crops that the test subjects produce to maintain a positive cash flow.

The above experiment is a very basic way to attempt to determine how much the service would help the customer. In order to get more accurate results, Freight Farms would need to run more tests and use test subjects of different experience levels and group them the same way as described above in the *Determining Value with Customer Results* section. However, in order to run a more accurate experiment Freight Farms would need to build more Freight Farms and hire more test subjects. Running that type of experiment is likely not feasible, opposed to the first experiment described which would be easy to do using the experimental Freight Farm that the team already has.

10.0 Recommendations

10.1 Service Structure

When creating their service, Freight Farms must decide how they will structure their service for their customers. This includes whether to charge customers a flat monthly fee versus an hourly rate, offer a basic and premium service versus one standard service, and requiring annual contracts versus offering monthly contracts. The advantages and disadvantages for each of these structural options for both the customer and the company were discussed in section 5.0 *Structure of Service*.

The first issue for the structure of the service was whether to have customers pay an hourly fee or a flat monthly fee for the offered service. We recommend that Freight Farms charges customers a flat monthly fee for the provided service. Freight Farms places a very high value on the success of their customers, especially their initial customers. The feedback from these customers can greatly influence their future sales. Charging customers a flat monthly fee will encourage them to use the offered service more frequently because they would have already paid for unlimited use of it for the month. In addition, it will provide Freight Farms with a regular/predictable revenue stream for them to rely on.

The next decision about the structure of the service was whether to offer a basic and premium service versus one standard service. We recommend that Freight Farms initially just offers one standard service that entails all of the features. This will make things simpler in the early stages of the service. Freight Farms may want to offer different levels of service in the future because it may lead to them attracting customers that did not want to pay for the full service, but would pay for a cheaper scaled down version of the service. In order to determine if this would be effective, they should keep note of any customers that do not opt for the full service, but mention they would have been interested in a scaled down version. However, Freight Farms must remember that if they offer a cheaper, scaled down version of the service, they could end up with more customers and less revenue.

The final decision that needed to be made was whether to require customers to sign annual contracts or let them have month-to-month contracts. Our recommendation is that Freight Farms requires customers to sign annual contracts. This will also create a more stable revenue stream that will greatly help support the company in the early stages. It will likely allow Freight Farms to offer its customers a cheaper rate than if they had month-to-month contracts. Also, it

will stop customers for opting for the service for a month when they are having issues then cancelling immediately after.

Summary of Decisions:

- **Flat monthly Fee** vs. Hourly rate
- Basic and premium service vs. **One standard service**
- **Annual contracts** vs. Month-to-month contracts

10.2 Pricing the Service

In section 8.0 *Cost to Provide Service* we estimated the cost to Freight Farms to provide the post-sale service to the customer at \$70,000. We made the assumption that when this service is implemented, the hydroponic expert will be supporting approximately 30 customers. This makes the cost per customer to provide this service about \$2,333 per year or \$194 per month. This creates a price floor for the service offered.

In section 7.0 *Profitability of Freight Farms to Customers* we found the estimated net income for Freight Farms' customers based on which crop they are growing. The estimated net income varies greatly based on which crop they choose. Growing Basil can produce a net income of as much as 7 times that of growing lettuce and 4.5 times that of growing Spinach. Due to this, we decided to take the average of the four numbers which gives us \$66,749 per year of estimated net income. If we take 10% of that number we get \$6,675 per year or \$556 per month, which gives us a price ceiling for the offered post-sale service to the customer. This cost would cut fairly heavily into the estimated net income of lettuce and spinach, but still be affordable. If growing Basil (lemon) which is the most likely option, this number would be less than 6% of the estimated net income. Below is a chart showing the information described above:

Lettuce	Basil (sweet)	Basil (lemon)	Spinach	Average	10% of Avg
\$16,764	\$106,671	\$117,138	\$26,424	\$66,749	\$6,675

At this point in time, Freight Farms only has one customer currently growing crops with a Freight Farm and therefore does not have enough information available to determine the true value of the post-sale service. Once Freight Farms has enough customers to obtain a significant amount of data they should follow the steps outlined in section 9.1 *Determining Value with Customer Results*. If they start officially running the service prior to this information being available, they should choose a price between the range of \$2,333-\$6,675 per year or \$194-\$556 per month.

10.3 Mechanical Service Representatives

Freight Farms can offer customers all over the country growing advice from one hydroponic expert through the use of technology. However, if mechanical components of the Freight Farm break, someone must go to the customer’s location and fix it in person. Freight Farms has three options on how they can attack this issue; have customers find their own mechanic to fix it, fly service representative to where the problem lies, or create a system for trained representatives to exist around the country. Having customers find their own mechanic takes the pressure off of Freight Farms, but takes value away from the product and may alienate the customer. Flying service representatives to the customer can become extremely expensive if customers are located all around the country. The final approach will be more difficult to implement, but will be the most effective solution if done correctly.

This solution involves training mechanics around the country to become certified Freight Farms Service Representatives. The best way to do this is by creating a series of webinars that

shows how to fix the most likely problems that may occur in a Freight Farm. These can be viewed online by anyone in the country that Freight Farms allows to do so. Once the mechanic has viewed the webinar, they should be tested on the material before certified. These mechanics will not be employees of Freight Farms but will be able to fix Freight Farms as a side job. Freight Farms should offer the training to the mechanic for free, and then take a cut of the money they make off the customer for fixing their unit. This will allow the maximum amount of service representatives to exist, while also obtaining a profit.

Freight Farms should keep track of where all their customers are located and reach out to mechanics near these locations. They can convince the mechanic of the opportunity for them to make extra money as a side job as a certified Freight Farms Service Representative. This will create a web of service reps located in different parts of the country, without the need to hire a full team of workers.

10.4 Additional Service Features

One additional feature we recommend Freight Farms adds to its service is a weekly or biweekly scan through of every customer that has the service's Freight Farms. This could consist of the hydroponic specialist tapping into a customer's Freight Farm cameras and examining the plants for issues. He could be looking for things such as signs of disease, droopiness, or anything else that seems to be incorrect. The specialist could then screen share with their system to see if anything in their settings seem to be out of sync. If there is a problem, the hydroponic specialist could then call the owner of the Freight Farm and deal with the issue from there. A specific protocol should be created and followed so this task can be performed quickly and effectively.

This would be something the hydroponic specialist could do when he does not have any customer calls to maximize his time and effectiveness. Depending on how busy he is, this could be either a weekly or biweekly task for each customer. This extra feature will also add a lot of value to the service and create an additional selling point to the customer.

10.5 Freight Farms Entrance into the Food Distribution Channels

As Freight Farms moves forward, it will be required to have a target market. As we have discussed, the company should carefully analyze the distribution channel to decide to whom and how they should sell their product. After analyzing the distribution channels, it seems best if Freight Farms focuses on selling its product to chain stores. Freight Farms can contact thousands of stores to try to promote their product and to try to sell a freight farm to each store. This could be hugely profitable for Freight Farms and for the store chain. Freight Farms could sell many of their farms to these large stores who have cash on hand to spend on the farm, and the chain store could hire a minimum wage worker who could check in on the farm daily and let the plants grow. This would be the best option if stores were willing to buy the product.

The second best option for Freight Farms would be to sell directly to the farmers. Farmers could make a profit year round if they were to use Freight Farms to grow produce, which they could sell in the winter, a typically quiet and non-profitable time for many farmers who are unable to work during the cold months. Farmers with their own stores could keep them open throughout the year. However, many farmers may not have the cash to invest in a Freight Farm. In order for this to be successful, Freight Farms would have to provide a payment plan for a farmer who could pay the company back with the profits that they gain from the sale of produce throughout the winter months. This would benefit both Freight Farms as well as the

farmer because the farmer would make a profit year round, and Freight Farms could have a profit by selling the freight farm to many farmers throughout the country.

Another option for Freight Farms, outside of the distribution channel, is to sell to the government, which is always looking for ways to go green. Utilizing an empty roof on a government building could be a good location for a freight farm. Additionally, putting a freight farm on an empty city block would revitalize the area while at the same time provide food for the homeless or store chains that the government wanted to sell to. This could also be a profitable option for Freight Farms because the local, state, or federal government would be looking to buy a large amount of these. If the government had them available they could lease them out to farmers, this would limit the price that a farmer would have to spend but would make money for the government. This would be a goal over the long term and not as much in the short term.

Lastly, we suggest that Freight Farms could sell their farms to the distributors. Although this could be profitable, it could also be tricky because most distributors are not in the business of producing their own products for sale but rather are the middlemen who are looking for farmers who need their products distributed. This option may be the most difficult or unrealistic for Freight Farms because they would have to change how distributors function and would, in fact, turn the distributor into the farmer (Beaman and Johnson).

10.6 Name the Service

We recommend that Freight Farms names the service they will be offering to their customers. This will give the service its own identity as an add-on product to the Freight Farm. It will also make it much easier when talking about the service. In addition, Freight Farms can use this name in advertising campaigns that they may seek to run in the future.

The name that we recommend for the service is “Freight Farmers Plus”. We believe this is a unique and catchy name that goes along with the theme of the company.

10.7 Alternative Approach

Instead of making Freight Farmers Plus a post-sale service offered to customers of Freight Farms, make it a separate business that operates as a Hydroponic Consultant. The business could operate in exactly the same way, except offer the service to other hydroponic growers instead of just Freight Farms customers. As stated in section 2.5 *Hydroponic Industry*, hydroponics is estimated to be a \$1 billion industry. Offering this consulting service to anyone could lead to this separate business taking off and gaining customers much faster than if it was only offered to Freight Farms customers. Freight Farmers Plus would also have a much higher potential as a separate business unit than it would as post-sale service offered to Freight Farms customers because of the vastly increased target market.

The main disadvantage to this business strategy is that it will take some value away from the Freight Farms product because this is one competitive advantage that would now be offered to anyone. One way to slightly combat this dilemma would be by offering the consulting service at a discounted rate to customers of Freight Farms. Freight Farms should still market and recommend the service the same way as they normally would to their customers and use the fact that they will be receiving the service at a discounted rate as a selling point. Turning Freight Farmers Plus into a separate business unit will likely require Freight Farms to bring in a new member to the team and buy into the company in exchange for equity.

11.0 Conclusions

Freight Farms success as a company is based on their customers' success as hydroponic growers using their Freight Farms. Due to this Freight Farms must put a high emphasis on putting their customers in a place where they can succeed. One way Freight Farms will be doing this is by offering the post-sale service to their customers, which gives them access to a hydroponic expert.

We decided the best way to structure the service, which consisted of requiring the customer to sign annual contracts, charging them a flat monthly fee, and offering just one standard service. Since there was not enough information available to determine the true value of the service because there are not enough customers up and running with Freight Farms yet, we gave Freight Farms a price floor and price ceiling that they should charge the customers. The price floor was based on the cost to the company to provide the service and is \$2,333 per year or \$194 per month. The price ceiling is derived from the potential profits that the customers can make from the Freight Farm and is \$6,675 per year or \$556 per month. We were also able to give recommendations that will improve the service such as the mechanical service representative network and the routine hydroponic expert scan through. Finally, we gave our recommendation on which area of the food distribution channel is best for Freight Farms to sell to and recommended they name the service "Freight Farmers Plus".

By using the recommendations provided by the project team, Freight Farms will allow their customers to be more profitable and run their Freight Farms more smoothly. This will in turn add value to the product they will be selling their customers and Freight Farms as a company.

References

1. “About Us.” PodPonics. 18 January 2013. <http://www.podponics.com/content/podponics-team>.
2. Allen, Scott. "Pricing Methods." About.com Entrepreneurs. 2 Feb. 2013. http://entrepreneurs.about.com/od/salesmarketing/a/pricingstrategy_2.htm.
3. Beaman, J.A, and A.J Johnson. "A Guide for New Manufacturers Food Distribution Channel Overview." December 2006. Oregon State University. 21 March 2013. <http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/20443/em8921.pdf>.
4. Berry, Tim. “Determining a Plan for Setting Prices.” 1 January 2006. Entrepreneur. 29 October 2012. <http://www.entrepreneur.com/article/82730#>.
5. Folds, Evan. “The Hydroponic Industry is being Dominated by Unsustainable Growth.” Progress Earth Report. 28 February 2013. http://www.vortexbrewer.com/pdf/special_report_17.pdf.
6. "Freight Farms | Grow Food Anywhere." 2012. Freight Farm. 5 Dec. 2012. <<http://freightfarms.com/>>.
7. Harris, J.M., et al. “The U.S. Food Marketing System, 2002: Competition, Coordination, and Technological Innovations into the 21st Century.” August 2002. USDA Agricultural Economic Report 8. 11 March 2013. <http://ideas.repec.org/p/ags/uerser/34001.html>.
8. “Hydroponics”. 28 February 2013. Wikipedia. 28 February 2013. <http://en.wikipedia.org/wiki/Hydroponics>.
9. “Management Engineering.” WPI School of Business. 26 February 2013. <http://www.wpi.edu/academics/business/mge.html>.

10. McNamara, Brad. Personal Interview. 2012-2013.
11. Morgan, Jacob. "Would you pay more for excellent customer service?" 8 August 2010
Social Business Advisor. 25 March 2013. <http://www.jmorganmarketing.com/would-you-pay-more-for-excellent-customer-service/>.
12. Wasserman, Elizabeth. "How to Price Business Services." 1 November 2009. Inc. 29
October 2012. http://www.inc.com/guides/price-your-services_pagen_2.html.

Appendices

Appendix A- Potential Profitability of Freight Farms to Customers

Annual Income Statement		Lettuce (bibb)		Basil (sweet)		Basil (lemon)		Spinach
Yield		21472		13956		13956		13956
Selling Price	\$	1.50	\$	8.75	\$	9.50	\$	3.00
Revenue	\$	32,208	\$	122,115	\$	132,582	\$	41,868
Operating Cost*	\$	15,444	\$	15,444	\$	15,444	\$	15,444
Net Income	\$	16,764	\$	106,671	\$	117,138	\$	26,424
Initial Investment**	\$	61,500	\$	61,500	\$	61,500	\$	61,500
Payback Period (Yrs)		3.67		0.58		0.53		2.33
5 Year Profit	\$	22,320	\$	471,855	\$	524,190	\$	70,620
Yearly Return on Investment		7.26%		153.45%		170.47%		22.97%

Annual Operating Costs*		
Energy	44589 Kilowatt hours	\$ 2,347
Water	3960 Gallons	\$ 27
Supplies		\$ 1,170
Labor	20 hours/ week @8.75 per Hour	\$ 8,400
Insurance		\$ 3,000
Routine Maintenance		\$ 500
Total		\$ 15,444

Initial Investment**		
Freight Farm	\$	60,000
Site Prep	\$	1,000
Initial Training	\$	500
Total	\$	61,500

Appendix B- Tracking Sheet for Customer

Customer Name:

Week	Hours Spent on Freight Farm	Times Serviced*
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
Totals	0	0

Crop Cycle	Cycle Length (weeks)	Type of Crop	Crop Output
1			
2			
3			
4			
Total	0		0

*This is the number of times the customer contacts the Freight Farms team with issues of for help running their Freight Farm