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Even' Star Organic Farm

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The house was quiet as Brett started to brew his first cup of coffee for the day. The roosters had just started to crow as the sun was rising over the fields. It was the first week of June in 2001, but the summer season was already promising to be very difficult for the farm. Late spring had been unseasonably cool and wet. Many seedlings had been washed away during heavy rains. And the tomatoes, his feature crop, had suffered from some blossom-end rot. As a result, yields were going to be clearly lower than planned. But now, with the sun beaming into the kitchen, Brett had to make some decisions about how to sell his crops as they began to come in.

His business had grown over the years, and he was on the verge of reaching what he considered to be financial stability. He had many potential customers in three different market channels: restaurants, farmers' markets, and community-supported agriculture (CSA) subscriptions. Given his lower than usual yields, he would be unlikely to fill that potential demand in any of those three customer segments. As a result, he wondered which channels he should serve and how many customers in each.

COMPANY HISTORY

Even' Star Organic Farms was founded in 1997. Brett Grohsgal quit his job as a chef in Washington, D.C., to grow organic tomatoes for upscale D.C. area restaurants. With his wife Christine, he bought 100 acres in southern Maryland. The couple set aside 1 acre for their personal use and built a farmhouse on it. They built farm buildings (a barn and a greenhouse) and erected fencing. They spent a significant amount from their savings in the process and also assumed significant debt. Julia Shanks Babson College

The first few years were very lean. Until the farm started showing a profit, they were reliant on Christine's limited outside earnings. Brett hoped the farm would become profitable enough to support them both comfortably in the near future. He felt his selling decisions for the approaching summer market season would be critical in pursuit of that goal.

Brett had to deal with all of the classical concerns of a farmer, which are also standard worries of any entrepreneur: his value proposition, market demand and price, production volume and quality (e.g., his crop mix and yield), cost of operations, and cash flow.

MARKETING ORGANIC PRODUCE TO THREE SALES CHANNELS

As a small farmer, Brett markets directly to his customers. Initially, he sold exclusively to upscale restaurants. Each restaurant typically purchased a total of about eight cases of mixed varieties of produce per week. As the farm expanded, Brett began to sell at farmers' markets as well. Just last year, he began selling through community-supported agriculture (CSA). Each of the three channels has its own pricing structure. Also, each of the three channels requires different levels of support activity and resource utilization.

Brett's primary investment related to marketing is a truck he uses for his deliveries. He bought it used for \$7,000 and expected that it would last him about 100,000 miles, at which point he would scrap it. The truck requires an additional \$0.13 per mile for maintenance and repair. He also monitors his fuel usage for delivery trips. Based on expected pump prices this year, he expects to have an average cost of \$0.21 per mile for fuel in the coming summer.

THE RESTAURANT CHANNEL

Restaurants require deliveries on Thursdays in order to accommodate the weekend rush of diners. Brett's round trip for the deliveries to 10 restaurants last year required 220 miles and took him a full eight-hour day. He figures each restaurant after the first adds another 5 miles and another 30 minutes to his trip.

In order to service the restaurant customers last year, Brett spent 6 hours a week calling the 10 restaurant customers. He needs to let the chefs know what produce is available and then take their orders. Chefs are not the most accessible lot, so it could sometimes take several phone calls to each chef. Still, Brett considers this to be important market development work and plans to do the same this year. Brett spent an average of \$4.10 per week on toll calls to the restaurants last year. Packing the truck for a restaurant delivery run only took 5 minutes for each customer. Last year, with 10 customers, it consumed 50 minutes of laborer time per week. The total average weekly sales mix for the restaurant customers from last year is shown in Exhibit 1.

Exhibit 1

Average Weekly Restaurant Delivery Composition (Total for 10 Customers)

	Cases
Tomatoes (large)	21.75
Tomatoes (small)	35
Watermelon	4
Okra	1.5
Basil	2
Cucumbers	9
Sweet potatoes	3.33
Winter squash	2.25

THE CSA CHANNEL

The members of the CSA pay a subscription of \$400 at the beginning of the 15-week season. Every week, each subscriber gets a box of the currently ripening produce in a mix that yields about \$27 worth of produce at prices that fall somewhere between restaurant and farmers' market prices. Brett makes the decision as to what goes into the box each week. The selection is based on the availability of the crops, but Bret is committed to variety and abundance. Further, he knows that his feature crop of big tomatoes is a critical component of the CSA mix. If the customers received less than 1/8th of their seasonal content in big tomatoes, he believed that they would not be likely to return as customers in the following year.

Like restaurants, CSA orders require weekly communication. This involves much less phone time. Last year, his average CSA-related long-distance charges were only \$0.70 per week. As a service enhancement for CSA subscribers, however, Brett emails them every week with recipe suggestions for the current week's produce. Invariably, his email inbox is full of questions and comments from his customers that require response. On average, Brett spent about 2.5 hours per week on CSA communication last year.

Brett makes the CSA delivery trip on Fridays. All of the subscriber boxes are dropped off at a single location. Last year, the round trip consumed 2 hours and 70 miles. Brett considers this travel and delivery time to have been a constant, regardless of the number of CSA subscribers he had.

The primary labor time effort required by the CSA simply arises from packing a variety of produce in each of the subscriber boxes. Every week, each CSA customer gets a cardboard box (not the same as a harvest case) full of the different current offerings from the farm. The customer does not get a choice in the contents, so it is a great way to dispose of the farm's excess yields. The overall seasonal ratio of the contents of a CSA box is shown in Exhibit 2.

Exhibit 2 Average Make-up of a Single CSA "Box"

	Approximate Percentage of a Standard Harvest Case	CSA Caselot Price	Extended CSA Price		
Tomatoes (large)	12.50%	\$ 36.00	\$ 4.50		
Tomatoes (small)	8.25%	36.00	2.97		
Watermelon	10.00%	20.00	2.00		
Okra	5.00%	36.00	1.80		
Basil	5.00%	24.00	1.20		
Cucumbers	16.67%	24.00	4.00		
Sweet potatoes	10.00%	36.00	3.60		
Winter squash	18.75%	36.00	6.75		
Total CSA-rate value	<u>\$ 26.82</u>				

The downside in selling through the CSA is that each box takes about 8 minutes to pack and load onto the truck. Last year, Brett had 33 subscribers and the weekly process of boxing and loading CSA produce for those customers required over 4-1/2 hours of his laborers time. He pays his laborers \$10 per hour, so this packing/loading time cost him \$44 per week last year. In order to keep the enterprise income in perspective, Brett also "pays" himself \$10 per hour for his "labor."

THE FARMERS' MARKET CHANNEL

The summer farmers' markets are a high-risk/high-return sort of venture. On sunny days, Brett usually returns to his farm with all of his produce sold. He could sell any of his produce in the farmers' markets, but through the course of the season he can only sell 600 cases (limited by truck capacity). Furthermore, since buyers tend to purchase in smaller quantities and select their own produce, Brett can sell at higher prices than either the restaurants or CSA subscribers pay. The downside risk comes with inclement weather. The worst case is rain. Then the customers don't come and Brett returns with as much as half the product unsold. Some unsold produce ends up spoiled and has no sales value. This is especially true of the large and small tomatoes, the okra, and the basil. Based on past experience, factoring in the likelihood of rain, resulting sales levels, and spoilage rates, Brett estimates that on average, he loses15% of items in those four categories of produce when they are offered through the farmers' markets. The other crops (watermelon, cucumbers, sweet potatoes, and winter squash) are hearty enough to allow some pieces to be offered for sale in the following week. The overall spoilage rate for those varieties was 10% last year.

Brett sold on two market days last year. He registered with the municipal organizers for each one at the beginning of the season. Each market required him to commit to a single stall to be occupied every week for the full 15-week season. There was no further communication with those organizers except face-to-face during the market days. The Saturday farmers' market was in Chevy Chase, MD; it was about 180 miles round trip. In order to be ready for the onslaught of customers at the 9 a.m. opening, Brett had to leave by 6 a.m. He typically did not return to the farm again until 6 p.m. While the Sunday market in Arlington, VA, was closer (only 110 miles roundtrip), his travel and selling time was only one hour less.

Selling at the farmers' markets consumes big chunks of Brett's time, but that is not the only aspect that is labor-intense. Preparing the truck is also time-consuming. Preparation for the farmers' markets takes Brett two hours of his own time for each market day. This is because Brett needs to bring a full "portable retail store." He has to pack signs and banners, decorations, folding tables, and a tent awning. The manner in which the truck is packed is important, since the display materials have to be accessible in a sequence that allows for a quick and efficient set-up once he arrives at the market.

THE PRODUCE

In the summertime, Brett grows 25 varieties of tomatoes in two broadly defined classes: cherry (small) tomatoes and main-crop (big) tomatoes. He also grows cucumbers, okra, watermelon, zucchini, sweet potatoes, and basil. In the springtime, Brett plants a pre-seeding cover crop, also known as clover. Just before the summer crops are planted, the clover is mowed into the ground, providing necessary nutrients to the new seedlings. Different clovers are used for the various plants. The tomatoes use a type that costs \$50 per acre to plant, grow, and turn under. The sweet potatoes do not require any cover crop. All the remaining crops use a clover that provides higher levels of phosphorous and costs \$60 per acre.

The tomatoes are started from seed in the greenhouse. They require careful attention and daily, gentle watering. They are gradually moved from small to medium to larger pots until they are ready to withstand the elements. Brett estimates that it costs about \$1 to get each seedling from seed to planted-in-theground. He plants 7,000 tomato plants per acre (regardless of the size of the plant's fruit). The other crops are less expensive to get into the ground. For example, the zucchinis are directsowed; the seeds are put directly into the ground.

Once the seeds and seedlings are in the ground, they are covered with sheets of black plastic mulch, with holes cut out for each plant. The material required to cover an acre costs \$133. The plastic prevents weeds from emerging among the crop plants, prevents evaporation of the plants' requisite water, and acts as a solar blanket. During a drought, this is essential to keeping the plants well hydrated.

During dry spells, the irrigation system provides what nature has not. Over the course of a season, Brett usually spends about \$50 per acre on irrigation. As the various crops ripen, workers pick the produce and place it in wood-framed crates (cases) specific to the vegetable type. These are the cases in which items are delivered to the restaurants. They are also the containers in which the week's leftovers are taken to the farmers' markets (although they must be removed for display at the sales stall). Before delivery to the CSA subscribers, however, the vegetables must be unloaded from the cases, sorted, and then repacked into cardboard boxes.

BRETT'S DECISIONS

Crop yield is highly dependent on the weather, and the weather has not been kind this growing season. In fact, Brett expects his yield to be lower than standard for five of his eight crops this summer. Small tomatoes and okra will probably be 10% below standard yield rates. Large tomatoes will probably come in at 12.5% below standard. Watermelon crop will be about 16.7% lower than normal, and cucumber yield will be off by 25%.

Without doing the math, Brett knows he cannot satisfy all of his potential customers. He has an additional 10 restaurants interested in buying from him beyond the 10 he supplied last year and believes he can sell to any or all of them. Furthermore, he believes that, at the \$400 subscription price, he could probably increase his CSA client pool from last year's 33 to as many as 90.

Brett gathered together some additional data from last few seasons. Exhibit 3 contains some additional data related to this season's crops. Exhibit 4 lists current selling prices.

All of the produce has to be harvested, regardless of his selling choices. Also, for each restaurant or CSA subscription customer he takes on, he must sell to that customer for the entire 15-week season. If he stops in the middle of the season for any single customer, his reputation will suffer seriously and he may not be able to return to that entire customer group again next year. Similarly, he believes that the choice to sell at the farmers' markets is a season-long commitment.

Brett knows each decision he makes will be critical to his success. His immediate needs are to determine how he should apportion his sales effort for the current season's crops across the three customer channels. Which channels should he operate in and how many customers should he take on in each channel? Clearly, he needs to consider the effect of his choices on the current season's income. He therefore needs to estimate the net increment in profit for each channel/ customer count combination. Yet he must also keep in mind the long-term effect of his choices on sales in future years.

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Various Production Data						
	Cost of Seed or Seedlings per Acre	Fertilizer Cost per Acre	Acres Planted	Standard Caselot Yield per Acre	Labor Hours per Acre (Plant, Care & Harvest)	
Tomatoes (large)	\$ 7,000.00	\$ 36.00	1.50	310	225	
Tomatoes (small)	7,000.00	36.00	1.25	540	200	
Watermelon	40.00	50.00	2.00	100	15	
Okra	8.00	-	0.08	1050	1000	
Basil	7,500.00	20.00	0.10	720	360	
Cucumbers	12.00	50.00	1.00	335	65	
Sweet potatoes	1,248.00	-	0.08	1333	1350	
Winter squash	12.00	50.00	2.50	53.3	27	

Exhibit 4 **Retail Prices per Caselot**

	Res	staurants	CSA		Farm Market		
Tomatoes (large)	\$	40.00	\$ 36.00		\$	45.00	
Tomatoes (small)		26.00	36.00			40.00	
Watermelon		20.00	20.00			22.50	
Okra		24.00	36.00			40.00	
Basil		18.00	24.00			25.00	
Cucumbers		24.00	24.00			28.00	
Sweet potatoes		36.00	36.00			40.00	
Winter squash		36.00	36.00			40.00	

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