

SEASONAL REPORT 2003: May We Learn from Our History

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As consumers are becoming more health conscious, restaurants have added more vegetables to their cooking, and grocery store produce sections have become increasingly important. The number of farmers' markets in the U.S. has risen by 79 percent in the last five years, growing to 3,137 markets in all 50 states¹. About three million Americans a week now get their fresh food directly from the farmers who grew it. At the same time, the organic food industry, led by the organic produce segment, is growing by 20 percent or more annually. It is an excellent time to be an organic produce farm.

Traditionally, growers have overlooked the importance of marketing, focusing instead on producing a good product. The innovative grower will learn to produce what a buyer needs, rather than attempting to find a buyer for whatever has been grown. It would be devastating for a farm to find out after harvesting that no one was interested in buying its product.

RETAIL MARKETING

The starting point when marketing to retail outlets is to identify their needs. A modern farm needs not only to focus on production, but also to understand a prospective customer's needs and requirements as far as quality, and packaging, not to mention the items they need. The way to succeed in agriculture is through research and record keeping: learn from history or repeat it.

Although Missoula merchants are interested in doing business with local growers, they have reservations about their ability to meet the standards of the market. They understand that local growers are capable of producing fresh vegetables of retail quality, but express concerns about the lack the commitment, expertise, and resources to harvest, package, and deliver the produce in a commercially acceptable manner.

Loyalty is one of the major barriers that a new producer needs to overcome, as well as one of the motivating factors that any grower strives for. Once a long-term relationship exists retailers are more likely commit to local agriculture, adding to the feeling of community, and allowing them to sell seasonal offerings at the peak of freshness. Rather than competing with these existing relationships, new producers need to identify market

¹Statistic provided in a *New York Times* article September 29, 2002

trends, cater to supply shortages, and seek out creative opportunities for improvement through research.

Retailers and restaurants want to know specific information about a grower's products. They like to know the availability of products that are anticipated and expected harvest dates, months in advance. Winter is the prime time for Common Ground to establish relationships with retailers because there is plenty of time for questions and feedback. If we understand our buyers' needs ahead of time it will be easier to meet their needs during harvest season.

GROCERY STORES

Knowing that grocery stores like to see samples before buying locally, Common Ground salesperson, Craig Brown, took samples to many of them as the vegetables became available. The farm was mainly trying to promote freshness, so the samples had to be delivered straight off the stem. Although the effort was good, the execution was poor because no contact was made with the retailers ahead of time. The samples he brought were overgrown, not up to par with the industry standards. The result was a bad first impression. This kind of mistake can be avoided in the future by establishing a relationship with buyers ahead of time and learning about their expectations beforehand.

The bulk of every produce section is the staple items, available year-round. They include apples, bananas, broccoli, carrots, lettuce, oranges, onions, potatoes, and tomatoes. The top 30 produce items account for 70 to 80 percent of total produce sold². Staple items are the highest in demand, therefore staples are the most supplied vegetables on the market.

Shelf space is always limited, and since staple items are so often available from other sources it can be difficult for local growers to compete. In the summer, when local produce is at its peak, supply becomes higher than demand, creating a surplus, driving the price down. Since vegetables are only available within the frame of their harvest season, it creates an irony in that the price is cheapest when a vegetable is at its best. A red bell pepper sells at Missoula Albertson's in May for \$2.49, yet it sells for only \$0.75 in August when it is fresh.

Produce managers use the same tactics as fishermen, fishing for people. The bait has to be displayed cleverly, tastefully, primed with a sharp hook: buy a peach and get one free. When produce managers have a bite, they reel in their fish. Because of the increasing demand for freshness and variety, many supermarkets attempt to set themselves apart from their

²Beamer

competition by offering more low-volume specialty items. Specialty items are available only during certain times of the year.

Organic produce is considered a specialty item for most grocery stores. A classic issue has been concern that promoting organics might imply that conventionally grown produce is in some way inferior. As recently as 1990, organic produce was sold almost entirely through direct marketing facilities such as farmers' markets. Since that year, retail sales of organic produce has grown by 20 percent or more annually. In 2002, 40 percent of all organic foods were purchased at retail markets³.

Despite rapid growth in sales and production, consumer demand for organic produce is still minimal compared to conventional produce. In 1997, the U.S. organic industry represented only 1 percent of the total \$394 billion of retail food sales. Although the organic foods industry makes up only a sliver of the total food sales in the U.S., the value added by the organic label cannot be overemphasized. Growing organic vegetables is a natural opportunity to find shelf space when specialty items are in demand.

As a newly organic farm, Common Ground had to take caution when marketing its produce as organic this season. The farm was not certified by the state of Montana until August 26, when the salespeople, Deb Keep and Craig Brown, were finally able to use the organic label to promote our 42 certified crops. Organic certification was the ticket into some of the area's most exclusive grocery stores such as Rainbow's End Natural Foods, in Hamilton, and Missoula's Good Food Store.

Good Food Store is the foremost natural foods outlet in western Montana. By definition, it is a full-service chain that attempts to project an image of excellence by touting superior quality standards. Good Food Store insists on having the widest variety and the highest grades of produce, regardless of price. The business' overwhelming success led to a recent building expansion from 7,150 square feet to 27,172 square feet in 2003.

Common Ground approached the Good Food Store a number of times during the growing season, trying to put ourselves on their shelves. It was not until September 15 when one perfect ear of corn convinced the produce manager, Paul Rosen, to make an order. We delivered his order that day and he was more than satisfied with what he received; he said that our corn was particularly good. He said everything was great, except for some woody beans. After receiving credit for the beans, plus an extra half-bin of corn, Rosen was grateful. Yet, in the courtesy calls that followed, Rosen did not feel the need to order anything more until

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October 24.

Good Food Store has shown favor in supporting local agriculture, but most local farms are unable to supply the large quantities they ask for. Rosen said that his store sells 50 pounds of red bell peppers every day. By comparison, Common Ground produced only 50 pounds a week. Among the many sources of Good Food Store produce are Cal-Organic Farms, the largest organic vegetable farm in the nation, and Earthbound farm, who operates on 125,000 square feet in San Juan Bautista, CA and 115,000 square feet in Arizona and Imperial Valley during winter months. Needless to say, competition is stiff.

This season, Common Ground had only one grocery store customer that made purchases consistently. Bi-Lo Foods placed an ad in the Missoula *Independent*, seeking local produce, and ended up committing to us with biweekly purchases throughout the season. Elizabeth (Biz), the produce manager, related with our farm in a way unlike any other by giving constructive criticism. Her primary concern was that we were consistent as far as size, maturity, and overall quality. Because she was willing to offer feedback, we were able to learn about her expectations. Since we were open to her criticism, listening and learning, we grew more sound as a farm.

Bi-Lo Foods is a price conscious grocery store. In attempts to offer lower prices, they are often willing compromise on variety and quality. However, Biz was trying to create a more positive impression of Bi-Lo, and did so by applying a strict attention to detail. She adhered to an arduous practice of price comparison, negotiation, and quality inspection. At the same time, she was patient with her local suppliers and very supportive of Common Ground Farm. Biz presented us with the opportunity to see our strengths and weaknesses from an unbiased perspective.

Orange Street Food Farm is another price conscious grocery store. Common Ground first sold corn to them in 2002. Food Farm achieved record sales on Labor Day of that year, and the success was attributed in part to the corn from Common Ground. They made several purchases from Common Ground in 2003, but only within a short time span from August 18 to September 3, the peak of the growing season. Food Farm was a corn regular, buying eight bins of 600 ears in two weeks. They were willing to pay \$0.18 an ear, but would not pay \$0.20 an ear. Even though it was the best corn in Missoula, it was never enough to please the produce manager. Rob was not satisfied with the price of our corn, so he stopped doing business with us.

Albertson's and Rosauers are probably the largest chains that Common Ground will deal with. There are four separate

Albertson's buildings in Missoula, and Rosauers is the only store that rivals the Good Food Store as far as quality. These are very successful stores that Common Ground could be tapping into. The problem is that produce managers at large chains like Albertson's and Rosauers base their stocking decisions primarily on what is available at the corporate warehouses rather than what is available locally; it is more affordable for them to keep the funds in house. There is an opportunity for us though: freshly harvested food has better flavor, greater nutritional quality, and its production supports the local economy. Even more advantageous, fresh organic produce is always preferred by customers.

Some stores use part of their produce section as an opportunity to showcase local organic farms, calling it a farmers' market. Some stores list the name of the farm in promotional materials during the sale of that farm's products. Some stores are willing to contract with farmers in advance of the season, and some seek out local farm products when they are in season. In order for this to happen, Common Ground needs to find its unique selling proposition: a distinct and appealing idea that sets it apart from any other grower.

After a long-term relationship is established, a creative way for a farm to reach these stores is by offering packages of produce ahead of time. Before any seeds are planted, growers must have a firm understanding of the buyer's needs. If stores are willing to contract with farmers in advance, there are opportunities for value priced packaged deals. Deals like this require trust and loyalty from a buyer, as well as dependability from a grower.

Here is a metaphor to illustrate: a build-your-own swing set. A buyer is given a list of complete kits to choose from, with dozens of options. There is the standard swing set with two belt swings and a trapeze. There is the "Humdinger" swing set that includes a see-saw and slide. And there is the "Grand Daddio," the ultimate, deluxe model with a fort, two slides, a buoy ball swing, and a bubble panel. The customer supplies the lumber and the seller supplies the good stuff.

Similarly, vegetables could come in a packaged deal. Packages of produce would be available based on what was in season. There would be small, 6-tote packages with staple products or medium-sized, 10-tote packages including some specialty items. And there would be the "Kahuna" model for places like the Good Food Store, a 24-tote package à la mode. The customer supplies the lumber and the seller supplies the good stuff! Stores will save money and farms will move a lot more produce. The idea is to simplify the art of selling thousands of items by reducing the number of options, making it easier for the customer.

RESTAURANTS

Restaurants made up a very small percentage of Common Ground retail sales in 2003, 8.4 percent, but the market potential cannot be overlooked. The advantage of targeting restaurants is that statistically, Americans are eating more meals away from home. An average of 4.2 meals per week were commercially prepared away from home in 2000⁴, that's one out of five meals. According to the same survey, 12.8 percent of men reported eating a commercially prepared lunch an average of six to seven times per week. Males 18-34 averaged 5.8 commercially prepared meals per week. Individuals with higher household incomes were more likely than those with lower incomes to dine out.

Furthermore, there is an increasing demand for fresh vegetables among restaurants. Consumers at full-service restaurants ordered side or appetizer salads with nearly 14 percent of their meals in 1991⁵. According to Consumer Reports on Eating Share Trends, vegetables appeal more to older adults, especially consumers with higher incomes. The National Restaurant Association reported that nine out of ten restaurants with plates averaging \$8 or more offer vegetarian entrees.

There are a growing number of restaurants in Missoula that offer vegetarian dishes. Tipu's, fully vegetarian, describes itself as the premier four star East Indian restaurant. Tipu's menu, www.tipustiger.com/menu.htm, features many of the organic vegetables that Common Ground grows, including corn, specialty `greens, jalapeños, and more. Other Missoula restaurants serving vegetarian dishes are Food For Thought, Mustard Seed, and The Bridge, none of which has been a customer for Common Ground. Not yet anyway.

Full-service restaurants and fast food outlets are the two largest segments of the food service market, accounting for 81 percent of commercial food service sales in 2000. Other commercial suppliers of away-from-home food include lodging places, retail hosts, and social caterers. The largest noncommercial food service segment is education, \$26 billion in sales⁶. The University of Montana's dining options include several restaurants and also provides a variety of buffet-style meals at their cafeteria, The Food Zoo.

Common Ground salespeople visited nearly every grocery store in the area, from Hamilton to Polson, and many of the

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⁵Statistic provided by *Restaurant USA Magazine* June 17, 2002

⁶Statistic derived from USDA Economic Research Service's *Food Market Structures*, www.ers.usda.gov

restaurants. Yet the two outside salespeople accounted for only \$2,841.29 total earnings and 382.3 sales hours spent. Inside sales to restaurants and grocery stores totaled \$6,544.90 in less than 100 sales hours. Total retail sales in 2003 were \$9,386.19.

There are plenty of factors that may explain the low volume of sales to retailers; production is one that can easily be fixed. The following production problems have hindered relationships between us and our buyers: lack of consistent quality, uneven sizing, overripe products, lack of advance notice of availability. Another step in harvesting was often overlooked: cooling the produce to remove field heat, a problem that was especially apparent in our produce stands. Because fresh fruits and vegetables continue to respire after harvest, precooling would have prolonged shelf life. When we neglected to cool our produce before delivery, our local produce may have had an even shorter shelf life than a similar product shipped from a distant producer. That's not cool! We took away days of shelf life.

Marketing to grocery stores and restaurants is a costly task for a farm. Outside sales are probably the most expensive part of marketing, but also the most necessary. Delivery costs are also high. There are obvious investments with every order: gas and mileage plus labor hours, the cost of packaging, labels, and other marketing expenses. Because of these expenses, marketing arrangements with other growers may be advantageous, especially for an emerging farm like Common Ground. Cooperative action may reduce the costs of marketing and delivery, plus allow farms to access larger markets. For example, a collection of local producers might find it possible to meet the quantity requirements needed to establish relationships, such as 50 pounds of red bell peppers for Good Food Store.

If Common Ground was able to define all of these costs, record, analyze, and organize the data, it would be possible to figure out a system that would be more efficient and profitable. There is an abundance of research available at the farm, the bookshelves and file cabinets are overflowing. However, there is only so much that can be learned from books, and nothing is more relevant than learning from our own history; the answers may be better achieved through record keeping. In 2003, Common Ground took the first step, by simply taking notes.

A conflict in the past had been organizing the myriads of information that traveled through the farm each day, so Common Ground invested in an elaborate Microsoft Access database. Here is an example of how it was designed to work: studying carrot profitability begins with the cost of seed, labor costs are added for planting, weeding, irrigating, and harvesting, and the costs of

marketing are also included. These costs are weighed mathematically against the purchase price, and profit margin is achieved. Production notes are also recorded, enabling the user to better determine variables such as plant spacing, depth, appropriate watering, etc.

OTHER RETAIL MARKETS

Organic Earthly Delights' Christina Remien was a unique customer of ours. She approached Common Ground early in the spring, wanting to purchase wholesale organic produce that she would deliver to homes in fruit/vegetable baskets. She expressed a great deal of interest in our specialty products like purple bunching onions, lemon cucumbers, and tomatillos, and often asked for recommendations. Christina was our first and last customer, calling in weekly orders from July 9 to November 1, and she came to our farm every Monday to pick up her vegetables. Organic Earthly Delights was a precious customer for Common Ground this season, and Christina was an absolute pleasure to do business with.

COMPETITIVE ANALYSIS

What we learn about others may also help us to learn about ourselves. Seeking a true competitive analysis, we must first "walk a mile in someone else's moccasins." Here is a brief summary of a few of the farms and other operations that are relevant with Common Ground.

Lifeline Farm is a major supplier of dairy and produce in the Missoula area. Based out of Victor, MT they are 36 miles from the city; Arlee is 26. Their farm is not only certified organic, they are certified biodynamic. In order to bear the Demeter certified biodynamic emblem, Lifeline has to raise 80 percent of its own organic feed. Lifeline employs a solar-energy generating system for their produce, and they have recently added a dairy processing facility for cheese and bottled milk. Besides their assorted vegetables: lettuce, potatoes, squash, and others, they offer bedding plants, dairy products, beef, pork, lamb, and wool.

Lifeline's website, at www.montanamadeonline.com, indicates the magnitude of the farm: they deliver cheese throughout the U.S. and abroad. Similar to our "Montana Fresh and Local" trademark, they use "Montana Made" as a slogan. The Missoula *Independent* has published at least two feature stories about Lifeline, one on December 5, 2002, and another October 9, 2003. The *Independent* said this about Lifeline: "the end result is hippie cows living on healthy land - and damn fine cheese that the locals can afford." Although the articles made no mention of vegetables, they are relevant examples of the valuable media exposure that

one can work toward. Press releases can be a catalyst for features like these.

Montana is home to more than 39 Hutterite colonies, known for their strict religious commitments and their production of food, including garden produce. In Montana, Hutterites produce about 60 percent of the state's pork, half of the eggs and about 17 percent of the milk⁷. The German-speaking men who do all of the harvesting, sell their vegetables cheaper than any other farm in Montana. They sell corn at only \$0.10/ear, compared to our \$0.18/ear. Pumpkins sell for \$0.11/lb, so grocery stores can them \$0.12/lb; even cheaper than Wal-Mart. One reason for the low pricing is that there are no labor costs. No other farms are able to compete with their prices, but there are better farms as far as quantity and quality of vegetables.

In August, Bi-Lo Foods and other local stores purchased corn from the Hutterites because they were by far the cheapest. Most corn sells in Missoula five ears for \$1. However, Biz was not satisfied with the Hutterites' corn, so she bought a bin from Common Ground in September. She realized that her customers were more inclined to buy higher quality corn, even if it was more expensive, and she continued to buy corn from us. When pumpkins were in season, she came to us first because she knew she could expect higher quality.

Farmer's Own is a wholesale brokerage that represents 20 organic farms in the Northwest, allowing them to access large volume markets. They ship organic produce from warehouses in Olympia, Seattle, Portland, and Spokane to Missoula, and throughout the U.S. Farmer's Own is owned by Charlie's Produce, who is the main supplier of conventional and organic produce to many of the grocery stores in Missoula, including Bi-Lo Foods and Good Food Store.

Montana's Mission Mountain Market along with AERO, Alternative Energy Resources Organization, piloted a Buy Local Food and Farm Products Initiative in Helena and the Mission Valley. The initiative was designed to expand the markets for local farms through cooperative distribution. In 2003, AERO adopted a "Buy Fresh, Buy Local" campaign that was part of a nationwide Buy Fresh, Buy Local effort. A group of California growers called CAFF, or Community Alliance of Family Farmers, launched what may have been the original Buy Fresh, Buy Local campaign in October, 2002.

One of the main tasks of Montana's Mission Mountain Market is to organize farming cooperatives. With that in mind, they initiated the Western Montana Growers Cooperative, making its first

⁷Statistic provided in an article published March 4, 2003 by *Choteau Acantha*, a weekly newspaper out of Choteau, MT

restaurant deliveries in the summer of 2003. Members include fruit and vegetable producers, both organic and conventional, Common Ground Farm joined the co-op at the end of October. The organization receives a 10 percent share of everything sold, which is worth the cost for the added marketing. The only drawback is the possibility of competing against ourselves.

WHOLESALE MARKETING

Besides the Western Montana Growers Co-op, some of the unconventional wholesale markets we encountered were fire camps, and produce stands other than our own. Fire camps proved to be inaccessible except for when they approached us. A business card with a phone number was all they needed. Our farm also supplied Nancy Wilson's produce stand in Ravalli, Wind Mill Village, for a short time.

One of the classic avenues for selling farm produce directly to consumers is a pick-your-own, or u-pick operation, where the farm invites buyers to come and Veg Out. Since u-pick farms allow customers to harvest produce themselves, labor costs for harvesting are reduced, and tasks such as washing, sorting, and packaging are eliminated. Customers have shown a lot of interest in picking their own produce from Common Ground, notably berries, and the farm's scenic location and organic nature is undoubtedly enough to appeal to a new audience. U-pick farms are a trigger for positive feedback by word-of-mouth: the best most effective form of advertising.

Common Ground allowed u-pick customers in 2003, but it raised concerns about liability. What if people damage farm equipment or hurt themselves? Most pick-your-own business takes place on the weekends and it usually requires more liability insurance, not to mention supervision. However, these are minimal costs, and there is a likelihood of added profits and favorable exposure.

FARMERS' MARKETS

Farmers' markets help growers test product acceptance and popularity, network with other farmers, and establish a wider customer base. On Saturdays, beginning May 10, there were as many as 100 vendors at the Missoula Farmers' Market showcasing produce, plants, flowers, breads, and coffee. Common Ground attended the market for the first time in August, and every week following. At minimum, our farm earned \$150 in the three hours we were able to sell. The most profitable day was the last day of the season, October 18, 2003. The weather was perfect, and there were thousands of people in attendance, according to Missoula

Farmers' Market staff. Mary and Russetta sold \$437 worth of vegetables, namely winter squash, Roma tomatoes, bell peppers, Halloween and Sweetie Pie pumpkins, and gourds.

The day before every market, Friday, was the busiest day of the week at Common Ground Farm. Throughout the season, we experienced both success and failure, and fortunately we learned from our mistakes. The key to a good display on Saturday was preparation and presentation beforehand. The following was our formula for success: the Missoula Farmers' Market had to be treated like any other customer, so it started with a sales order and an invoice. The order was put together based on what was available in the fields, hot items at previous markets, and other items with good potential.

And besides harvesting, presentation was the most important detail. Having a diverse selection of products was advantageous, and large-scale booths attracted more visitors than small so it was a good idea to bring extras. Sticker labels had to be visible for advertising purposes, and totes had to look their finest. The vegetables had to be of the best quality, with good shape and color. Vegetables needed to be arranged in a way that would draw attention, so we used principles of art: balance, contrast, pattern, rhythm, emphasis, unity, and variety. An example of this was our bell peppers. Instead of a simple 10-pound tote of mixed bells, we created overflowing rainbows of bells: green, purple, orange, red, and chocolate.

Table arrangement was also important. We started with four small TV trays, a total surface area of only 7.65 square feet. Then we included a folding table 5a feet long, adding 14.22 square feet more. The most effective use of table space was to spread them out in a concave U, with the long table at the base and the ends reaching toward the crowd. That way, customers could walk inside and be surrounded by vegetables.

The market was fickle, it was difficult at times to judge the turnout. A couple of things were predictable though: bad weather usually meant fewer visitors, bigger vendors got a lot more attention, and the ideal spot was underneath a shade tree in a very visible spot near the beginning or end of the street. Also, being the first or only vendor for any given fruit gave growers enormous favor in the eyes of the patrons. Our corn appeared before anyone else's, and we sold it immediately that day. As far as I know, we were the only vendor to offer gourds, and our Speckled Swan gourds were incredible. Likely, other farms will catch on next year, but if they do not, we will sell at least 20 of them every day at \$8 apiece. That's \$160 right there.

At the height of our season, September 6 we had our worst

showing. The weather the day before was partly cloudy and smoky at the farm, 84 to 89 degrees Fahrenheit, and the harvesters were slow in picking the order for the market. At the end of the day, they threw together what little they had in the warehouse and loaded the van. Totes were not clean or labeled, vegetables were not at their best, nor were they arranged tastefully. Our farm ended up earning less than \$150, yet Hung-Wen and Russetta earned more than \$350 the week before, and \$270 the next week. The smoke was an issue, but it was no worse than the week prior. Preparation is the key.

It would be advantageous for a farm to buy a season pass so that there would be no competition for space, and so people could become familiar with the growers in their designated spot. More than 20 new vendors applied for a season pass in 2003, but not a single new pass was given because none of the old ticket holders dropped out. The price for a season pass was only \$135, but they were practically impossible to get. For those of us who did not have a season pass, we had to race for a space at 6:30 a.m. even though the market didn't begin until 9:00 a.m. One grower mentioned that she had to claim her spot by 3:30 a.m. Season pass holders did not usually arrive until 8:00 a.m. A season pass would have saved at least 1½ hours worth of labor.

Mel Parker, Market Master, offered no sympathy in a board meeting held in October. The Missoula Farmers' Market has been immensely successful and growth is inevitable, yet he spoke out against the idea of expansion. He said, "We are the third best farmers' market in the nation and we want it to stay that way." Some of the other board members advocated the idea of a separate farmers' market in Missoula, although they were not interested in starting one themselves. Is it possible to have a new market at the same location but on a different day, like Sunday? How much would it cost to reserve Caras Park on a Saturday morning? Is there a better place?

Cucumbers did not sell at Farmers' Markets because there were too many vendors selling them. We had to be alert when pricing our vegetables because it might have left a bad impression on our farm if we were putting smaller family farms out of business. We had no desire to become the Wal-Mart of farming. At first, I asked \$1 apiece for cucumbers because I didn't want to put the lady and her daughter next to me out of business, but three for \$1 was the going rate. Lemon cucumbers were more eye-catching and tasty; a great specialty product for the market. Hardly anyone was interested in summer squash either, but zucchini were the best, followed by striped squash.

Peppers, on the other hand, sold very well. Anaheim and

bell peppers caught the attention of people passing by; they were excellent. Chili peppers, both green and red, sold at \$0.25 each, but there was some grumbling about them being too pricy. Small bells sold at \$0.50, and mediums at \$0.75. Orange and yellow bells were the most valuable, followed by reds, purples, greens, and chocolates. Bigger bells would have definitely sold for \$1.00 if they were nice and colorful, but \$0.75 was a good price. Hot peppers were often requested, but customers were only interested in buying three or four jalapeños at a time so it was hardly worth selling them.

One time, we sold 30 pounds of cherries in three minutes, literally. Fruit and sweet things in general, like berries and cherry tomatoes seemed to be highest in demand. These were finger foods that people could snack on while they enjoyed sunny days at the market. The things that sold for us were those that nobody else had: we were selling ears of corn by the hundreds at times, and melons up the yin-yang, but not many cucumbers, beets, carrots, or potatoes either.

Raspberries and black currants sold at the market for up to \$5 a full pint, while grocery stores like Albertson's were selling half-pints for \$3.99. If we were to charge \$4 for a half-pint, or even \$3, we would be making a greater profit. If berry lovers prefer to buy their berries in half-pints, then that's what we should give them. Likewise, beans should be sold by the half-pound because a half-pound sells for \$1.00 as opposed to only \$1.25 for a full pound.

People were always on the lookout for organic berries and herbs; organic produce in general was hot! The word alone was enough to lure the true enthusiasts. They were going gaga over organic sweet corn, organic basil, organic pumpkins. One woman took a look at some of our brightly colored summer squash and said, "You guys are organic, I can tell. Your stuff is beautiful."

Besides attending the Saturday farmers' market, Common Ground also frequented other markets. The Tuesday market in Missoula drew in less than a quarter of the crowd that attended on Saturdays, although the competition was not so overwhelming. An average two-hour Tuesday for us drew in \$150. Our farm also supported a new farmers' market in Ronan on Fridays. Plus, we traveled all the way to Hamilton for the Bitterroot Valley Community Farmers' Market on Saturdays.

Rod Daniel was the organizer for the Bitterroot Valley Community Farmers' Market. Daniels challenged our farm's attendance at the Hamilton market, because he did not want us to take away business from other farms, like Roaring Lion Organics and Homestead Organics. He said that our farm was "not local enough," and asked us to leave, threatening to change the bylaws

about who was allowed to be there. Deb Keep quoted him as saying, "We're proud to be local growers in Ravalli and we want to keep it that way." He also had this to say, "You don't support the local, you're just competition." Despite his disapproval, Common Ground attended the market three times: September 20, September 27, and October 4. We were well received by most of the people, earning \$142, \$174, and \$270.

In the spring, we need to be ready for the 2004 farmers' market season. First, we need to attend the board meeting for the Bitterroot Valley Community Farmers' Market and speak about what Common Ground can contribute to them. Several other growers have voiced their support for us. We missed half of the Missoula Farmers' Market season this year, starting May 10, so we have to be ready next May for a good first showing. We can sell dried gourds and habañeros, grown in the 2003 season as well as newly budding crop transplants. If we time it right, we will have fresh greenhouse vegetables to sell, and our cold frames should be well on their way.

ROADSIDE STANDS

Our roadside produce stands accounted for 70 percent of all sales in 2003, more than farmers' markets, restaurants, grocery stores, and all other markets combined. The first stand opened in Arlee on Friday, July 25, with stands opening soon after in Bonner and Lolo, and then in Pablo and Polson. On August 29, our least profitable stand, in Pablo, was relocated to a truck stop outside of Missoula called Muralt's. Sales grew rapidly throughout August and into September, peaking on Labor Day weekend.

Some of the stands were well received from the beginning, like the one in Bonner. Two Bonner customers were David and Mary Montague. They sent an email to our farm that said, "We used to fantasize that someday, someone would put up a stand and sell organic produce. We discovered your Bonner location and were absolutely thrilled." The letter is attached with this document. By the end of September, stands in Bonner and Polson had built a strong reputation among the locals.

The following statistics, provided by a Wisconsin study on roadside stands, gives a description of the type of person likely to shop at a roadside stand. Approximately four out of five customers are local, residing within 40 miles of the market; 12 percent are tourists. An average of \$7 is spent per customer, one-third of the customers spend between \$5 and \$10 per visit, one-fourth spend less than \$5, and 10 percent spend more than \$20. A quarter of all visitors are over 62-years-old, and 43 percent are 26-45. The average customer will shop at a direct market farm establishment

about two times per month, compared to nine grocery store trips per week. Approximately half of all visitors have vegetable or flower gardens at home⁸.

Bonner Produce Stand attendant, Bridget Havlik, said that 80-90 percent of all sales occurred between 3:00 and 6:00pm. She became one of our leading sales people after discovering the advantages of creative marketing. Havlik invested in dozens of ideas, adding colorful balloons and scarecrows to the stand. She even tried to advertise to truckers with a CB handheld radio. At the end of the season, she asked the farm to design some flyers for a “Last Days” sale in October, and she posted them in gas stations and restaurants nearby. At the sale, Bridget created a dynamic display with half-price vegetables and activities for kids like pumpkin carving and face painting: frogs and such.

Other successful marketing tactics were gift packs and customer cards. For the gift packs, we created pocket-sized recipe sheets with four different vegetable-centered dishes: Roasted Tomatillo Salsa, Heart-choke Dip, Gazpacho Alfresco, and Potato Corn Chowda. Then we collected tomatillos, onions, and basil, for example, and packaged it along with the recipe as a Roasted Tomatillo Salsa package. We sold the whole kit, including the recipe for \$5. Other gift packs for sale were Potato Corn Chowda: two potatoes, two corn ears, and an onion for \$2.50, and Appalachian Slaw: two cabbage heads, one cucumber, onion, and a tomato for \$4.

Customer cards allowed locals to save \$1 for every \$10 spent. It was important that the cards be durable enough to keep in a wallet so they would not be immediately discarded. The cards provided a way to advertise tastefully to local customers. Our logo, contact information, and web address were given. It would have been beneficial to offer the customer cards as an incentive after collecting some marketing information. For example, if we asked questions like: “Would you be interested in receiving a biweekly newsletter?” the information would help us to better meet the needs of our customers.

As far as farms stands are concerned, roadside signs are one of the most effective methods of advertising, second only to word-of-mouth. Signs needed to be up as soon as the stands opened each day. Our signs were designed to attract the attention of motorists by using large letters and high contrast in colors, dark green writing on a yellow background. In seven words or less, they showed the location and/or listed products available, emphasizing freshness. The only thing lacking in our signs was pleasantness. Although their main purpose was to gain attention, and they didn't

⁸Wolfe, Holland, Aaron

necessarily have to be attractive in order to attract, the signs might have been more appealing with a taste of artistry.

One of the similarities between roadside stands and farmers' markets was that presentation was pivotal to selling produce. Our products needed to look clean, fresh and appetizing to be attractive to customers. Sunflowers and corn stalks were essential for decoration. White bed sheets, or better yet tie-dyed tapestries, had an impressive effect, hanging from the canopy and draped over the tables. Colorful dry erase marker boards showed the daily specials, and it was helpful to have a laminated price list on site as well as sticker labels.

As a rule of thumb, when consumers are seeking something particular, they will go first to the place where they know it will be in stock. For that reason, our roadside stands needed to be filled up with a consistent supply of produce. According to research conducted at Ohio State University, the item most often purchased at roadside stands was sweet corn. The survey found that 70 percent of respondents listed sweet corn as the item most often purchased, 66 percent listed tomatoes, and 30 percent listed melons⁹. Harvesting was seven days a week and deliveries arrived at each stand on a biweekly basis, yet keeping the stands fully stocked seemed like an impossible task this season. Undoubtedly, our consumers had to buy elsewhere at times because our stands were not routinely supplied.

In the future our sales attendants need to be educated about the produce they are selling in order for consumers to build loyalty to our roadside stands. They need to know how to prepare the produce they sell, and what's in season. If the produce is being marketed as organic, they must be able to answer questions about how the organic produce was grown, what the difference is between conventional and organic produce, and why would somebody pay more for organic produce. Attendants should also know which vegetables need watering and which should be kept on ice.

Several attendants suggested a workshop, led by Bridget, for example, or someone else who understands how to make the stands succeed. There are hundreds of important steps that need to be taken by each employee, every day. There are cleanliness standards, safety matters, and other liability concerns that need to be dealt with. After all of the hiring is done in 2004, Common Ground needs to bring everyone together and run through the entire process at once.

ORGANIC GROWING

⁹Wolfe, Holland, Aaron

Organic growers are required under the National Organic Rule to use sanitation and cultural practices first before they can apply any material to the field. Weed and insect problems must be remedied using methods alternative to herbicide and pesticide, which usually means any weeding is done by hand and insects are controlled by flyswatters (no exaggeration). Still, the industry is growing. According to the most recent Department of Agriculture estimates, certified organic farmland in the U.S. nearly doubled between 1997 and 2001, from 1.3 million acres to 2.3 million acres.

Plastic is to organic farmers as duct tape is to plumbers. Plastic is the answer to everything: temperature extremes, weed and pest problems, irrigation, you name it. Cold frames are said to be the simplest and least expensive climate moderator. We constructed three new cold frames in 2003. Each was 96 feet long and 35 feet wide, making 3360 square feet of space inside. The structures endured some brutal wind and hail storms in the spring with only minor damages. The first transplants went into the cold frames May 7-8, including summer squash, eggplant, and cucumbers. These were among the first crops to appear on our original Price & Availability list July 8.

The side walls of the cold frames needed to be rolled up on hot days to cool it down inside. There was a problem with the design of the roller, though, because as the plastic was rolling it became heavier, and gravity wanted to twist it back to the ground. The handle was a steel bar, and it had to be tied to a rope at the top to prevent it from crashing down. Four people were “Donkey Konged!” in the forehead, and one person had to get stitches in the face. The way to prevent accidents from happening in the future is to use a wheel on the handle that can be turned from the side. The wheel needs to be capped so fingers don’t get mangled in the spokes. See the illustration that follows.

Remay is a floating row cover made of spun plastic like a spider web. We used it to protect crops from frost when temperatures dropped slightly below freezing. Remay allows 80-90 percent of light through, and supposedly lets rain through too. Some people also use it to keep insects away as an alternative organic insect repellent. Floating row covers like Remay can also be used inside of large cold frames as a double layer of protection from the weather.

Common Ground used blue plastic mulch to cover our transplants. Blue mulch is designed to stimulate plant tissues by reflecting a particular wavelength of light. Plus, it helps maintain soil warmth, conserves moisture, and suppresses weeds. We built a machine that helped us to lay the plastic using the tractor. With an irrigating drip-line running underneath, we laid out three rows of

plastic at a time. Using four people, we placed three rows of plastic and drip-line 300 feet in about one hour.

Laying plastic on top of the corn was the single most burdensome of all projects we encountered this year, in my opinion. To begin, the field had to be rolled smooth and rock picked. Then we created a machine that was designed to make the plastic easy to lay out. The machine itself was expensive and labor intensive. Pulled by the tractor, it was should've made this a one-man project. However, the plastic was fragile. Every time it ripped, the tractor had to stop and someone had to fix it. That person had watch relentlessly for rocks. A third and fourth person had to be on site to shovel dirt on the sides of the plastic to prevent air pockets (if air gets through it lifts up the entire row). On windy days, this small part of the task demanded at least twice as many hours. Sadly, the plastic was left on top of the corn for one or two days too long, and three-quarters of the seeds rotted.

Then the day arrived when we had to remove the plastic. Unbelievably, it was even more difficult than laying it down. The ground was wet, and so the dirt collected in mud piles while we were pulling it up. We had to have one person driving the truck and two in the back, pulling their arms off. Not only was the plastic tough to pull out of the muck, the soil was actually collecting on top of it so we were carrying round mounds and pounds of the ground. Six of us took turns for two days. We left the muddy plastic (weighing at least a ton) in a heap by the garbage cans and it wasn't until September, four months later, when someone tackled the project of removing it.

The reason we covered our corn in plastic was for a competitive edge. Theoretically, it would've enabled us to harvest our corn and sell it before any other farm. In fact, our corn was ready a week before anyone else, but the small profit we earned from being the first was painful in comparison with the hours and energy consumed hassling with the plastic. Laying plastic was one of our most widely utilized organic growing techniques, but the plastic did not come cheap.

Relying on old fashioned methods, organic growing is more costly than conventional. The most obvious reason is that organic farmers must meet stricter regulations governing all the steps of production. They substitute intensive management and labor for the chemicals frequently used on conventional farms. The shelf life of organic produce is also at a disadvantage because no preservatives are added. If organic growing costs 20 percent more to produce, then there are two ways to break even: the price of the product must be 20 percent higher, or 20 percent more of the product must be sold.

Marketing produce as organic, a farm can expect to be able to sell it at a higher price. Compared to conventional fruits and vegetables, organic offerings can contrast dramatically in appearance and quality. A taste of a ripe tomato or an ear of organic sweet corn can make a vivid impression. Only 2 percent of the U.S. food supply is grown using organic methods, yet sales are increasing by 20 percent annually. Organic food sales, including meat and grains, reached \$8.5 billion in 2002. Fresh organic produce accounted for 42 percent of that sales figure, or \$3.6 billion¹⁰. The *Nutrition Business Journal* estimates that organic sales will nearly double, to \$16 billion in 2006.

The growing demand for organic produce may be attributed in part to consumer awareness and concern for food safety. The Environmental Working Group, a research organization dedicated to improving public health and protecting the environment, compiled a list of produce with the heaviest load of pesticides, encouraging consumers to always buy these foods organic. In order of contamination level, spinach ranked highest, followed by bell peppers, celery, potatoes, and hot peppers. Peaches are the most contaminated fruit, then apples, strawberries, nectarines, pears, cherries, and raspberries.

Vegetables are not closely regulated by the government with regard to freshness and sell-by dates, but organic certification requires that produce is labeled as it comes out from the field. The sticker labels are a way of identifying and dating the vegetables. In 2003, Common Ground printed labels for our produce, placing them on totes before they went out to be filled or as soon as they had arrived from the fields. Labels had to indicate the name of the crop and the date it was harvested. They were different every day, depending on availability and frequency of harvest. Retyping them on the computer was tedious. We were never able to establish a system that was fast, and we wasted at least half of the stickers because we had to print them before we knew what exactly was going to be picked. There are two ways to fix the problem: some kind of a robotic picking schedule that shows exactly what will be harvested on each date, or by picking first, then recording what was picked, and labeling last.

Each crop has certain climate requirements. As far as temperature goes, 75 degrees Fahrenheit is optimum for photosynthesis and plant growth. Crops can tolerate up to 115 F. At 32 F, most plants experience a small amount of frostbite, and it will kill beans, corn, cucumbers, eggplant and peppers. Colder temperatures, 26-31 F may burn foliage but will not kill certain vegetables, like broccoli for example. The real cold weather

¹⁰Mulcahy

champs are beets, carrots, and spinach. Be that as it may, when temperatures turn well below freezing, plants grow slower and slower. The lower limit for quality harvest of most winter hardy crops is 15 F, but harvesting can be postponed until the sun warms the temperature as the plants will thaw naturally with their roots in the ground. The average frost sensitivity of various garden vegetables is shown in the table that follows.

In Montana, temperature extremes prevent four-season gardening. Missoula is a Zone 5 climate, with minimum temperatures ranging to 20 below zero F. Our colder temperatures probably explain why U.S. gardeners have never taken advantage of the adequate sun in the winter. In western Montana, as compared with the eastern plains area, winters tend milder while summers are cooler. The first night of frost in Arlee was October 11, later than usual, and the first day of snow in 2003 was October 29. After the snow storm, temperatures dropped significantly, but the growing season was nearly a month longer than expected. Making use of our cold frames provided an extra cushion, protecting the crops inside until the outdoor temperature reached 25 F.

The second component of weather is light. Sunlight intensity and duration are important for crop growth and development. Low light causes smaller leaves, poor pollination, and poor fruit quality. Common Ground Farm, in Arlee, MT sits on the 47th parallel of latitude, the same latitude as Quebec, Canada, known as a city with very harsh winters. All areas that lie on the 47th parallel experience a short winter day length. Seattle, WA is on the same sun line, as well as Zurich, Switzerland, while part of New Zealand falls on the 47th degree south.

Water comprises more than 80 percent of the living plants, and is essential for plant growth. Precipitation in 2003 was below the normal rate of about 12-15 inches in Missoula, and the same was true for Arlee. Weather patterns in Arlee are shaped by the mountains that surround the Jocko Valley. Most of the moisture falls on the western mountain slopes, which is usually sufficient for irrigation water, but it was not enough this season. This summer was extremely hot and dry. Irrigation became a matter of survival, and when the water privileges were reduced, we had to let things die. Our plants were thirsty, but there was nothing we could do. Because of under-watering, our Roma tomatoes were embarrassingly small and an entire crop of bell peppers, eggplant and other vegetables were plagued with brown spots.

At times, the wind seems to do more harm than good. It chills us to the teeth and blows dust in our eyes, and steals our hats when we least expect it. Also, more wind means more water

evaporation, and more water requirement. On one hand, wind carries pests and diseases away from crops. On the other hand, it carries them near to crops. That's the redeeming quality: it aids in pollination.

Soil is made up of two components: nonliving particles, such as sand and clay, and organic matter. Organic matter includes plant roots, plant and animal residues, microorganisms, and humus. Humus is plant or animal matter that provides nutrients and increases the soil's ability to hold water. From a plant's point of view, the purposes of soil are to provide support for roots, water, air, and minerals. Soil is the primary focus of organic farming. Organic farmers build healthy soils by nourishing the living component of the soil, eliminating or reducing the use of toxic chemical pesticides and fertilizers. Sustainable practices include the planting of cover crops such as clover to add nutrients to the soil, and crop rotation to replenish the soil.

Biotic factors that affected us this year were weeds, bacteria, insect pests, and wild animals. We had to use a fungicide in March called Champion WP, used in accordance with OMRI¹¹ to control an tomato virus in the cold frames. We also tried to slow the spread of bacteria by washing our produce in diluted bleach. The most prevalent insects were grasshoppers, but earwigs partied in the corn and green worms chilled like villains in the cole crops. Rodents invaded our seeds in the greenhouse, and later they nested in one of our produce stands. The deer held social gatherings in our raspberry fields over the winter, and paraded through the lettuce in the spring. An electric fence couldn't keep them away, but someone said that Irish Spring soap is the answer. We were also visited by a black bear several times.

CASE STUDY

A farm in Maine is turning greenhouse farming into a four-season operation, gardening on the flip side of the calendar. The farm is on the 44th parallel, the same latitude as Eugene, OR. The winter day length is surprisingly ample, but the challenge is to overcome the cold. The name of the farmer is Eliot Coleman, farm manager at a private school in Vermont and commercial vegetable grower in Maine.

Coleman's challenge was to teach students to grow fresh vegetables during the school year, through the cold winter months. His budget did not allow for a heated greenhouse, so he built a small cold frame and tried to fill it with chill-resistant plants such as spinach, carrots, and scallions. September 15, he and his students

¹¹Organic Materials Review Institute is an organization that specializes in the review of substances for use in organic production

planted Space spinach from Johnny's Selected Seeds (same source and variety that we planted). As the season grew colder and temperatures dipped well below freezing, some of the plants experienced a small amount of damage, noticeable by the leaves, but the plants thawed naturally with their roots in the ground. As expected, by the middle of November, the crops were not growing much anymore.

Then Coleman had the idea to add a second layer of weather resistance. First he built a simple, plastic-covered dome over the cold frame. The extra layer created a microclimate that was sufficient enough to extend the harvest season and keep the vegetables alive through the winter as one would with a heated greenhouse. The double coverage created a twice-tempered climate, and increased the relative humidity for an additional protection against freezing damage. In comparison with a heated greenhouse, Coleman said, "the difference is like being inside by the fire on a cold day or being outside with enough layers to keep you comfortable."

He applied the same concept to his commercial vegetable farm in Vermont. This time, his cold frame was much bigger: 30 feet by 100 feet (same size as ours). He experimented with inner layers of plastic, and found that floating row covers held a foot above the soil provided enough extra warmth to keep his vegetables growing. In order of cold tolerance and/or winter dependability, Coleman's major crops were bunching onions, spinach, carrots, lettuce, and beet greens. His farm produced salads and main course vegetables from October 1 to May 31. At either end of his season he also sold baby beets, new potatoes, and broccoli. The principle product was his baby-leaf salad mix that included red and green lettuce, arugula, and red beet leaves. He said, "People love the idea of having really fresh winter food harvested either that day or the day before on a local farm, instead of the usual week-old winter produce from faraway places."

The plastic fabrics he used were less protective against the cold than a glass-covered frame, but the self-ventilation and large-scale availability were advantageous. His interior covers were 20 feet wide and 50 feet long, supported by wire wickets, holding the plastic 12 inches above the soil. New growth was minimal during the coldest winter months as the crops were basically hibernating; harvest was slow and steady. At dawn, the plastic was frozen stiff with dew and leaves were covered in frost, drooping. Yet a few hours later, after the sun had warmed the greenhouses above freezing, the leaves were sprightly again. Coleman's harvest window was from 10:00 a.m. until 3:00 p.m. The crops did not need to be ventilated or irrigated until March because evaporation

was low, and the only pests he encountered were meadow voles.

Coleman's entrepreneurial risks allowed him to become a sole provider of fresh winter vegetables. His willingness to defy the rules of nature are admirable, and inspiring. I have three questions for Common Ground and one for Coleman. First of all, what can a farm in Montana do to extend the growing season? How can we twist the laws of ecology? When will Common Ground become Uncommon Ground? And furthermore, Mr. Coleman, how do you raise the side walls of your cold frames without being "Donkey Konged!?"

CROP SUMMARY

The organization of crops in our fields was chaotic at times, much like the piles of paper in our office or the tools in our shop. Hours and hours were wasted looking for things. Planting three different types of lettuce was acceptable, but planting beets, kohlrabi, and leeks in the same row was objectionable. For one reason, different crops demanded varying degrees of weeding, irrigation, harvesting, etc. Another reason is that certain crops were neglected because they were difficult to find. For better efficiency, we needed to avoid mixing different crops in the same row. It would have been beautiful to have all of bell peppers together, all of the pumpkins together, and so on, each grouped together by expected harvest date. Then we could have focused on one section of the field at a time. In October, we could have said, "So long, suckas!" to the summer squash and, "Yo," to the winter squash.

Another concern was labor. To me, the trouble began with our local high school employees that arrived in the spring. We could not depend on any one of them to show up for their shifts, much less work hard throughout the day. These laborers were a poor example for the new harvesters that arrived in the summer. The farm could not afford to lay them off, because it was sometimes difficult to replace them. Even with ads running in the *Missoulian* and at Job Service, we never seemed to have a strong labor force. The laborers' motto was best described by a T-shirt, "Don't sweat the petty. Pet the sweaty!" Still, we hated to see them go in October.

Our most abundant bean crop was the green "snap" bean. Our green bean varieties were Jade and Provider, and we planted the same number of each. The Jade variety was more slender and preferable for customers like Christina Remien, but Provider was bigger so it was quicker to pick. Johnny's Selected Seed catalog calls Provider "the standard for dependable, early production," and Jade "highest-quality, long, gourmet beans." It might have been profitable to differentiate the two by calling Provider "Bush" or

“String” bean, and Jade “Snap.” This season we called them both green snap beans. Green beans sold very well at Bonner Produce Stand \$2/lb, but sold for less, \$1.25/lb, at Missoula Farmers’ Markets. In the future, I recommend we sell beans for \$1 in 1lb clamshell containers, weighing a half-pound, because a full pound of beans tends to be more than is needed for an average consumer, in my impression.

Our yellow wax beans were a good compliment to traditional green beans. They were comparable in size to Jade beans, but the color was a sharp contrast and so was the flavor. Likewise, French beans were similar in appearance to our snap beans but offered enough of a flavor contrast to make them a specialty crop. French beans were smaller than the typical green beans, so they took longer to pick, but most of our customers preferred them. Johnny’s Seeds catalog describes them as “a petite filet with flavor, for gourmet markets.” Bridget Havlik sold out of them nearly every time at the Bonner Produce Stand. She watered her beans three times a day and rotated them. Paul Rosen of Good Food Store returned two full totes of French beans, however, because he felt they were too woody to sell.

Red shell beans, Dwarf Horticultural Taylor Strain, seemed like a nice contrast to the green color in most of our beans, but the shells were not entirely red, so they were not very attractive. Conversely, the dry beans inside were perfectly formed, white with red splashes of color. After some time on the vine, the husks became dry and brittle like hay, and were easy to remove. They can be sold in the off season, marketed as dry beans since the shell is the least appealing part.

Liana Asian long bean was expensive to plant, seeds were \$32.80/lb compared to \$5.30/lb for typical green beans. Regretably, it was not very productive for us this season, and a reason for this, I suspect, is that the plant prefers a tall trellis¹². We did not drape them on a trellis, probably because it would’ve taken a long time, so the beans had to grow on the ground. There were only a few to harvest until September, when they were great. The dark green shell grew up to 1½ feet long, pencil-thin with black beans inside; Asian long beans were definitely a specialty crop. They hit the stands for the first time in September, and Bonner Produce Stand sold them \$4/lb.

Soybeans and lima beans were also specialty items. Our soybeans, called “edamame” when boiled fresh in the pod, were small with only one or two beans inside. According to Johnny’s, there are usually three or four beans per fuzzy green shell. Our soybeans were undersized, making it a time consuming,

¹²A trellis is a structure of woven wood, trine, or other material that is used to support vines

painstaking crop to harvest. Lima beans were not harvested until even later in the season, September 26. Lima beans looked like 3-inch half moons with three tasty beans inside. We were reluctant to harvest limas and soybeans regularly for various reasons, so we did not get a clear picture about their marketability. What we do know is that there was not a single grocery store order for either of these beans, and those that made it to the stands did not sell.

All beans and snow peas were direct seeded May 21 to June 10. Seeds were 8 inches apart, averaging 450 seeds per row. Of the 42 total rows, 18 were green beans and 18 were snow peas, leaving one row of each of the following: yellow wax beans, French beans, red shell beans, Asian long beans, soybeans, and lima beans. In order of popularity, soybeans were most frequently purchased when they were available, followed by green beans, French beans, and yellow wax beans.

Farmers' market customers preferred peas to beans by a three to one ratio even though they were more expensive: \$2.00/lb compared to \$1.25/lb. Compared to our most plentiful bean, Provider green bean, snow pea seeds cost only 4 percent more, they required the same input and effort to grow, the same time to pick, and yet they sold for 60 percent more and were in much higher demand. Snow peas were the answer for customers seeking finger food. Peas and cherry tomatoes sold well in farmers' markets and roadside stands. A handful of customers also requested "sugar peas."

This season our snow peas were delicious, but were usually misshapen. They looked more like the round shelling-type peas, fat instead of flat, and the shape was a turnoff for some of our customers, like Biz, produce manager at Bi-Lo. She said that her customers were complaining because they looked "bolted," and they weren't buying them for that reason, even though they tasted fine. The weather was a big problem for the snow peas: too much heat and not enough water. At some point in late August, we had to give up on them so we could concentrate on rehabilitation elsewhere.

Radishes are considered to be an appetite stimulant, but that is probably not the case when they are woodier than a woodpecker. This season, ours were almost always harvested late. Some radishes grew to the size of tennis balls, and they were so woody that I could hardly bite a piece off. Biz made an order from us once that included radishes, and she was so impressed with her produce section at Bi-Lo that she treated her mother to a bunch of vegetables. Her mom's only complaint were those woody radishes. Radishes looked nice when they were clean, and it is no surprise that the sight of good radishes can trigger interest in other

vegetables, the same way as corn does, but a bad radish is like our goat urinating on his own legs to cool off.

Most people are entirely unfamiliar with kohlrabi, and there are not many growers in the area, so it is a specialty crop. Kohlrabi is a strange bulb of purple or white with antennae reaching out to big, green leaves. Harvested, it looks a lot better with leaves attached. Johnny's Seeds describes the flesh as crisp, and apple-like. The kohlrabi we harvested this season was almost always bigger than desired. Customers were into it, but it needed to be picked earlier and more often. The plant prefers cool weather, so mid-summer was the not the time to be picking it. Like radishes, when it is overgrown it turns woody and too stringy to eat. In the future, we should plant early and harvest while it is not too hot.

We planted more potatoes this season than any other vegetable besides corn and tomatoes, yet they were the least productive vegetable. Our new potatoes were first available in late July. With some difficulty, we were able to sell 2 pounds of red new potatoes for \$2 at farmers' markets and \$0.49/lb to grocery stores. A month later, the new potatoes were too large to be considered new potatoes, and they were too small to suit our grocery store customers so we made the mistake of trying to sell them come-as-you-are in 30-pound totes. As shown elsewhere, Bi-Lo Foods was very frustrated with our naivety, reiterating our problem with inconsistency. Our potato problems were about to get much worse though.

In August, Deep Keep expressed some concern about the potatoes that were coming in to the Lolo Produce Stand. She said they were diseased. Sure enough, the potatoes were almost entirely scarred, but it was not because they were sick; they were extremely thirsty. According to Johnny's Seed catalog, scabby patches are largely avoided if the soil is not allowed to become dry. Ours had not been watered for weeks because of problems with our irrigation schedule and conflicts over water rights, and unfortunately, we had to remove potatoes from our Price & Availability list because 90 percent of the entire crop was affected. We sold no more red potatoes and no Yukon Golds or russets at all, except in the produce stands and on the farm at a discount. The profit loss is serious. Here lies a valuable lesson: the appearance of produce is of utmost importance. Our potatoes were worthless because they were unsightly, even though beyond the skin they were flawless.

One Saturday, something funny happened. Early in the season, a couple of foreign women visited me at the Missoula Farmers' Market and they had never seen potatoes like ours. I opened a clamshell of perfect, golf-ball sized red potatoes for them

to look at and they assumed I was offering samples. They asked if the potatoes needed to be cooked, and I told them I didn't know for sure, I had never eaten them raw. So I took a bite into a raw potato, and then one of the ladies did the same. Neither one of us was impressed with the taste, but we laughed with dirt in our teeth. We both decided that they needed to be cooked.

Beets were nice whenever the leaves were intact, but our first ones were mangled by hail. Beets were terribly delicate. Transplanting was an arduous task because of this fragility, and so was every other step in production. The soil needed to be packed tight in the seeding trays, otherwise the plugs kept breaking, and plants had to be buried 3 inches apart which made it impossible to do fast. The answer to all of these problems is direct seeding. Although the crop could not likely tolerate the weather until April, beets are cold tolerant, and they can endure colder temperatures than most.

Our beets were neglected for awhile but the big ones were still very good, perfect for canning, and a second batch of beets grew well enough to be sold as beet greens. There were occasional requests for beets at the stands, but none for grocery stores or restaurants for whatever reason. Maybe we should have marketed them as canning beets or sweet beets, beets contain higher sugar content than any other vegetable. Maybe next season we can use the red ink for something creative.

An embarrassing thing happened in October, when Christina from Organic Earthly Delights ordered some beets, emphasizing her interest in the greens. I assured her that the leaves were excellent. The harvesters came in from the field with 20 bunches of beautiful beets and I knew our customer would be thrilled. While the beets were being cleaned, I was gone for no more than a minute writing the invoice, when Mr. Remien arrived to pick up the order. When I came back, our harvesters had clipped the perfect beet leaves right in front of his eyes. Christina called afterward and said that the greens were the most important part of her order, and in fact, it was the theme of her vegetable baskets that week.

Like beets, carrots are cold hardy, and cold soil makes them sweet as sugar. Peak availability lasts from August clear through November. We direct seeded our carrots this season, and they turned out excellent. When we harvested them early, they were valuable as baby-cut carrots, and they were even more valuable with the greens still attached. The yellow carrots were a hit among customers, the taste was superb, and orange carrots sold well too. The carrot tops appeared sunburned at times and were not always attractive, but we bunched them in fives whenever it was possible and baby bunches in eights. The only carrot type that did not sell

was the round, Parmex carrots. In my opinion, the round carrots didn't catch on because they were missing the key element found in all other carrots: the heart. Carrots were reasonably easy to harvest, using a shovel, but cleaning and bunching demanded a lot of time. They sold for dirt, so they were not very profitable, although the yellow ones added some more interest. Carrots softened in the sun, but at near-freezing conditions they were awesome.

Onions sold occasionally to grocery stores, but they fared much better at the stands. Purple bunching onions were highly colored and a huge hit. They were grouped in fives and green ones in eights, allowing us to sell the purples at a higher cost per onion. Bridget Havlik in Bonner said that if she trimmed and watered them daily she rarely had to throw them out. She also recommended growing some of the larger bulb-type onions in addition to our bunching onions.

The Purplette mini onions did not sell as frequently as green onions, but they definitely had potential. Mini onion bulbs were clean, glossy, burgundy, and golf ball size. They looked best with their outermost layer peeled, underneath the skin is a jewel. Purplettes were the best onions I had ever tasted, a specialty product for sure. Leeks were not as hot for us this season. The first problem was that they tended not to grow to the desired size. On August 29, we sold leeks and onions to Bi-Lo Foods. The leeks we sold were undersized, and the onions were oversized, and Biz was offended. Although they were not up to standards at grocery stores, they almost always sold at the produce stands.

I remember seeding some celery in February or March, but it never made it into the field. Where'd it go? I Dunno. I have a feeling the celery would fall into oblivion anyway, kind of like some of our other common staple crops. One thing that's funny, though, celery is listed on our organic certificate even though we never planted it.

Leafy vegetables, primarily lettuce, were the first crops planted and the first ready to sell. The lettuce seeds that started March 8 were planted in the field as early as April 25 and started selling June 30. The first lettuce endured a couple of cold nights, with lows 23 to 33 degrees Fahrenheit not to mention wind and hail storms. There were green leaf, red leaf, butterhead, and Romaine lettuce types. We recognized at first bite that we had a problem with our red leaf lettuce. The taste was extremely bitter so we weren't able to sell any, but the other lettuce types were not as bad. Still, we had to remove the outer leaves on some of our Romaine lettuce, selling only the Romaine hearts.

Some lettuce varieties can develop a bitter flavor in hot

weather, and other times it occurs when lettuce is too mature, but bitter lettuce is usually caused by lack of water. Lettuce is more than 98 percent water, and it takes about 6 gallons of water to grow a single head of lettuce. Au contraire, I predict taste may reflect the soil type, and if that is the case there is no way to avoid or correct the bitterness.

We planted two full rows of Broccoli Raab in the field, our first salad greens, but we ended up having none to sell because it was not presentable. I suspect that it was unrecognizable due to hail damage. The spinach we planted in May was destroyed mainly by hail, and by the way, spinach was even more difficult to transplant than beets, but a second wave of spinach was ready October 1. Our harvesters left 3-4 inches of stem on the spinach leaves and tied them together in bunches of ten.

Jane Lindgren, our primary greenhouse person, also planted Kale and Pac Choi late in the season and these greens were ready October 6. Strangely, we had four types of greens, including beet greens, to sell for the first time during the final week or two of our season. Specialty greens are inexpensive to produce and have outstanding market potential. They are becoming a fad in California restaurants, so I assume that Missoula will catch on to the trend.

Our broccoli was kind of shabby for the most part. The crowns were big, but not full, as the blossoms did not grow together in a pack. Our broccoli was bolted, meaning that it began flowering prematurely. Late harvesting would explain its irregular growth, but it was basically bolting before we knew it was ready. This was a hot summer, and it seemed that the heat was overwhelming for a number of plants, broccoli in particular. Even though it did not grow properly and was often ignored, the earliest broccoli sold reasonably well at produce stands and the taste was good.

White cauliflower would have been a staple crop for us, but ours was not white. Ours had a pinkish-purple tint to it, especially under the blossom, and so it did not sell. At first, I presumed that our purple cauliflower had some slight coloration effect on the white, but then I read that pinning the leaves of the cauliflower over the top of the head would have kept them white. The purple cauliflower was absolutely purple, it was impressive. The taste was different from normal cauliflower; someone described it as "tart." The Romanesco cauliflower was stylish too, with spiraling heads. This season, we neglected our cauliflower the same way we did the broccoli. At one point it was reeeal bad, infested with bugs, overgrown, and bolting. We had to drown the caterpillars in bleach-water. For future reference, salt water may be used to clean the cauliflower heads and to remove worms.

Cabbage was a moderate success this season. Under a couple of layers of waxy, loose outer leaves were nicely packed red and green cabbages. The red cabbage was a lot more appealing, in my viewpoint, although grocery stores ordered green heads more often. Requests for cabbages were rare, but our customers were always satisfied with them. In some of the cabbage heads, we had a problem with a tiny green caterpillar that liked to munch its way through, layer after layer. Also, overgrowth made some of the cabbages split. Cabbages sold at stands and farmers' markets, especially when peeled daily and watered. Heads lasted a week or longer with refrigeration.

Brussels sprouts were first seeded in March and planted in April. By the first week in September, we had more mini-cabbage sprouts than we knew what to do with. They produced a good amount through the end of September, when the cool weather improved the taste. We sold Brussels sprouts in 2lb clams at a low cost, but they did not appear to sell very well. Johnny's Seed catalog says that Brussels sprouts should be harvested after the first hard frost for best taste.

Artichokes were barely as big as baseballs, and they were slower to grow than the American economy after 9/11. Artichokes were not suited for our environment; that's why nearly 100 percent of all American artichokes are grown in California. Seeds started in our greenhouse February 13, and first emerged February 21. On June 4, 266 transplants went to the field spaced 2 feet apart. Still, we had no more than 100 sizeable artichokes to sell, which was not enough to supply even a single stand. Although they were small, the leaves were thick with edible flesh and the hearts were a fair size. The taste was also very good. We sold most of what we had at produce stands for \$2, and sold them occasionally to retailers. Common Ground organic artichokes would be a major money crop if we were able to come up with a more productive growing method.

Besides corn, tomatoes occupied more acreage than any other crop this season, nearly two full acres. There was a huge market for red slicing tomatoes but we were unable to reach it because unfortunately, ours were not very productive. Tomatoes became the vegetable that was most regularly wasted. If we expect to tap in to this trade, we need to be better prepared with unwavering irrigation schedules and daily harvesting in seasons to come.

Slicing tomatoes were a difficult crop for us this season. Although the taste of them was exceptional, the majority were not appetizing to look at. In fact, our slicing tomatoes were nightmares. The cracking was probably due to having an irregular water pattern. According to a tentative assumption, our tomatoes grew at an

irregular pace, causing stretch marks as the body grew too fast for the skin. Some of the tomatoes were also scarred with dry spots, and to top it all off, most of the red slicers were picked past their prime. That brings me to a profound discovery: The only thing scarier than a mad tomato, is a steaming tomato. And the only thing scarier than a steaming tomato, is getting “Donkey-Konged!” in the head by a swinging steel bar.

Even more unpredictable than the scars on the red slicers, the yellow ones were not affected at all. Our yellow slicers grew in exactly the same environment with proportionate amounts of water, yet they never split and rarely had any dry spots. And yet, customers showed no interest in the yellow tomatoes. The yellow tomatoes were racquetball-sized, and we called them 8-ounce tomatoes but they were actually smaller than we expected, 4-5 ounces. Our roadside stand attendants had difficulty selling them 3/\$1, and in some cases they couldn’t sell them 10/\$1. One customer returned an entire tote to the Bonner Produce Stand, claiming that they had no taste. To me, the yellow slicers were quite good. I’m stumped.

Also unaffected, our Green Zebra tomatoes looked really nice, a green fruit with yellow blush and darker green stripes on the skin. The flavor was tangy compared to red slicers, but the appearance was superb. We did not sell many of these fully ripe, green tomatoes, but they were certainly eye openers. Green Zebra tomatoes were tastier than the unripe red tomatoes commonly used for fried green tomatoes. This season we did not pick many red tomatoes while they were still green. If tomatoes are going to be a leading crop for us in the future, we may want to consider the possibility of selling unripe green tomatoes as well as on-the-vine tomatoes, sun dried tomatoes and processed tomatoes.

The size of our Roma tomatoes was worrisome at first, we expected them to be three times as big, but we were able to adapt to the way they grew and changed the way we marketed them. When we started calling them Mini Romas, they were incredibly edibly popular in our produce stands, especially Lolo. The taste was excellent and they retained their good condition longer than most other tomatoes. Grocery stores were reluctant at first to buy Roma tomatoes from us because they thought the size would be a turnoff to their customers, but Good Food Store was very impressed with them. In October, they ordered 45 pounds from us, packaged in 1lb clams, and they refused to pay less than \$2 each because the market value had risen. The next week, they wanted twice as many of them.

Cherry tomatoes were an even greater success story, and several people said that the tangerine-colored, sun gold cherries

were the best. In order of popularity, we sold red cherry, mini cherry, sun gold cherry, yellow pear, red pear, yellow cherry, red grape, green and purple tomatillo. Mini cherry tomatoes obviously took the most time to pick, and they were priced accordingly.

Bell peppers were the most frequently requested items from grocery stores, with the exception of cherry tomatoes. We sold more corn, but in every marketplace we sold a good deal of bell peppers too. Two dozen corn ears sold for \$6 at most, even at wholesale prices. But the same number of bell peppers sold for at least \$12, and at \$0.75 apiece they sold for \$18, three times as much as corn.

Green bells were ready for market July 8, and purple bells were ready by July 18, followed by red, chocolate, yellow, and then orange. At first, our bells were smaller than we liked, and sometimes misshapen. Often times they were ruined with brown dry spots due to irregular watering. However, the bells improved dramatically in the end of September at which time we were able to sell them regularly to retailers and to customers at farmers' markets and roadside stands. Our organic bells stood out from conventional bells with sharp, bold colors.

The size of a bell directly effects its value, so it was a bummer whenever they did not grow to be Jolly Green Giants. The majority of red, purple, and chocolate bells were small, especially purple, but we were fortunate enough to harvest a few totes of humongous softball-sized green bells, and there were a number of large yellow bells. Based on my own impression, the bell peppers were bigger outside of the cold frames. I think the reason for this is that they had more time to grow. Since the cold frames were significantly hotter inside, the added heat made them ripen too fast. The best examples were purple bells, which grew a lot bigger under a big red sky.

Poblano and Anaheim peppers grew very well this season. Often called "medium" peppers, poblanos were not hot and not sweet, and when they turned fully dry, and brick-red they were commonly known as "anchos." Pablanos were round and bell-shaped. Anaheim chili peppers were long, ranging in color from bright green to mahogany to red. Anaheims earned a great response when I first took them to the Tuesday farmers' market in Missoula, but were usually untouched at the produce stands. The same is true of pablanos, only people were even less interested. They quickly withered in the sun and did not sell if the skin showed any sign of wrinkling. Anaheims sold no higher than \$0.25 each. Poblanos sold for \$0.50.

Habañeros and jalapeños were probably important crops for us to grow, even though they did not receive the kind of customer

response we were hoping for. Jalapeños, the best known chili pepper of all, were indispensable to Mexican cooking, so they should've been a big seller for us. Right? Farmers' market customers were ecstatic when we brought them, but they purchased only a few peppers at a time, typically three for \$0.50. Educated customers, like the Good Food Store were willing to pay a lot more for habañeros. We sold organic jalapeños to retailers \$1.34/lb, and organic habañeros \$7.74/lb, more than five times as much. Customers were interested in hot peppers for sure, but sales were marginal, especially compared to bell peppers.

I presume there are two reasons why we sold so few hot peppers. The first is that it takes only one to heat up an entire meal. A full pound of habañeros is more than Speedy Gonzales could handle in a lifetime. Habañeros are said to be the hottest pepper variety available for commercial consumption. Additionally hot peppers seem to be out place in this part of the country, Mexico is 1300 miles away. In Montana, nearer to the Canadian border, habañeros are out of the ordinary, and since they are unfamiliar to us, Missoulians are naive to habañeros. I am editorializing, but the rationale is justifiable.

As a case in point, one customer from New Mexico visited the Bonner Produce Stand and was so excited to see fresh habañero peppers that he said he said he would buy all of them. But on second thought, he decided not to buy them because they were too red ripe in his opinion. He proceeded to educate our stand attendant about habañeros, saying the red ones were harvested too late. The attendant then proceeded to educate the entire farm about our hot peppers, saying they were harvested too late. Our harvesters then proceeded to pick the habañeros orange to green, and all stages in between. In reality though, the particular variety of habañero in our field, called Caribbean Red, was a red ripe cousin of the pepper in question, and had we decided to market the pepper using a name that we thought was more widely known, habañero. The customer was correct in thinking that our peppers were strange because they were a completely different type. The moral of the story is that a fish out of water can't swim in the dirt.

Jane Lindgren, our primary greenhouse person, swears we planted okra in our field somewhere. Mysteriously, we never saw any.

Eggplant were our most erratic crop; sometimes hot and sometimes not. Originally, we made mistakes in harvesting because we had not learned the desired shape and size. For example, we allowed our Japanese eggplants to grow long past maturity. Johnny's says that the desired shape and size for the

long, purple Machiaw variety is 9 inches, straight, and slender. Also, hanging the plants on a trellis would have given more room for the fruit to grow straight and long instead of curvy. Starting in late August, during the water shortage, the eggplant started to develop dry, brown blemishes. The spots showed up on every type of eggplant, more prevalent on the bigger ones, rendering the better part of our crop unsalable. Eventually, a regular water pattern in mid-September prevented many of these from being ruined.

Not only was the production of eggplant fickle, but customer interest was the same way. The Asian eggplant, long and black, was the least attractive and not at all popular. Grocery stores and restaurants favored the traditional, round Italian eggplant. Yet to me, the most impressive by far was the long, purple eggplant. Picked young, they did not have to be peeled, and so they could retain their alluring color during cooking. The downside of all eggplant types was that they were so delicate, and damage easily. That was also the upside for us, though, because the quality of eggplant in supermarkets tended to be poor, so there was an opportunity for local growers to offer a better product. The best eggplant, smooth, glossy skin, distinctly colored, would stand out before all other vegetables. Eggplant sold for \$1 or more, even if they were small. They were one of the farm's most valuable crops this season, if not the most. The marketing potential is shweet.

Summer squash was the first crop we harvested, and it kept growing all the way into October. It seemed to be the only decent thing that we had too much of. The colors of our organic summer squash were clearly superior to inorganic squash, especially zucchini, and at farmers' markets ours was the best. But squash did not sell well, and with the exception of zucchini, my guess is that at least three-quarters of all the good squash had to be thrown away because customers showed no interest. Toward the end of the farmers' market season, though, we started selling baby-size squash at \$0.25 each and they sold relatively well. Still, I vote we grow fewer summer squash next season unless we can find a more substantial market for it.

Harvesting squash was quick but not easy, the vines were sharp. Plus, it was difficult to avoid scarring the vegetables, as the slightest scrape of a fingernail would ruin a summer squash. In general, 9 inches was the acceptable size for zucchini, our most popular squash. Our produce stand customers tended to like them bigger, but grocery stores would not accept large squash, and restaurants liked babies. We sold 10 times more green zucchini than yellow, probably because it was most familiar. There was virtually no difference between yellow crookneck and straightneck

squash, so there was no reason for us to differentiate the two, and no reason for us to grow them both next season. Striped squash were the ones most requested after zucchini. Jane Lindgren, Common Ground plant doctor, said that the taste was terrible. Patty Pan squash were arguably the tastiest. They grew to the size of Frisbees, but fared better as a baby vegetables, as did all of our summer squash. A few of our customers were keen on the two-inch-wide baby Patty Pans, selling at seven for \$1, but others preferred them much bigger for stuffing.

In our geographic area, slicing cucumbers may have been the vegetable most commonly grown. As mentioned previously, at least a quarter of all vendors sold cucumbers at farmers' markets in Missoula. For the most part, our slicing cucumbers were smooth, crisp, tasty from end to end, although a fraction of them were blemished with scratches and dry spots. Another problem was that our harvesting was inconsistent. At one point in mid-season, we almost lost our best customer, Bi-Lo Foods, due in part to the irregularity of our cucumbers. The simplest way to reduce the portion of unwanted cucumbers is, of course, to harvest on a regular basis.

Farm fresh, homegrown cucumbers have a distinct advantage over grocery store cucumbers because during storage, cucumbers need to be waxed, in order to increase shelf life, so the skin must be peeled before eating. On the contrary, fresh cucumbers have a natural waxy coating that does not have to be peeled. Most grocery stores carry two main types of cucumber, regular and English, also called Dutch. English cucumbers are wrapped in cellophane and cost considerably more than traditional slicers.

As far as I know, Common Ground was the only local grower of long English cucumbers, lightly ribbed, dark green fruits averaging 11-12 inches. These cukes would have performed better with a trellis, allowing them to hang straight. Nevertheless, ours were better looking than the ones in stores, they were less watery than normal slicers, crispy and delicious. Surprisingly, these specialty cucumbers did not sell. Grocery stores showed no interest in our English cucumbers, and neither did many of our other customers. Albertson's was selling them individually for \$1.49, yet farmers' market customers seemed to think it was outlandish to pay \$1, even for a fresh one. If we were to grow these again, I would recommend that sales people bring samples for produce managers to taste, and offer incentives such as buy-backs for everything that does not sell.

Pickling and lemon cucumbers were rarely offered by other farms in our area, although they did not appear to be on everyone's

“Most Wanted” list. Jane Lindgren, suggested that we grow dill herb for accompaniment with our pickles, she is absolutely right. The lemon cucumbers were excellent both in the field and at the market. The ripe ones were easy to spot because they wore a hint of yellow in their otherwise pale skin. They were almost always harvested correctly with a consistent size, color, and shape, and not often blemished. They were a specialty market item that consumers wanted to know more about. Offering samples was the way to reach these customers, enabling them to taste and to see inside of the fruit. Lemon cucumbers were the best sellers of all four types, especially at farmers’ markets.

The only downside about our luscious, Common Ground melons was that the end came suddenly, the harvest season lasted less than three weeks. Hot weather made them ripen quickly, then the cool early fall weather kept them at a standstill. They kept coming in waves, but the late melons were colorless on the inside, tasteless, and worthless. We had to purchase cantaloupes from a farm in Dixon to supply the needs of our customers. The Dixon melon season lasted all summer long, explained by the cooler weather in Dixon, MT. I think the only way we could have profited more from melons is if we were able to extend the growing season, using a fan or something.

Melons were highly valuable. During the hottest week of the summer, in late July, our melons were growing wildly. By August we had all the melons we could handle, selling hundreds of them for \$2-3 apiece. We almost always sold out at farmers’ markets, and after a few taste tests, grocery stores and restaurants were craving them. Customers loved our small watermelons. The red iceboxes were requested most, but our yellow iceboxes earned a lot of attention with sampling. The French and Butterscotch melons were rich in flavor, similar to cantaloupe, but they were not as popular. My favorite was the Spanish melon, like honeydew. Chef John Heckert, of River City Grill in Bonner, agreed, “Your Spanish melons are exquisite.”

Pumpkins were also of great value. Even though competition was strong, pumpkins were a necessity. Demand started around September 20 and increased to the end of October, sneaking into November. Grocery stores paid \$0.12/lb which added up to \$2.16 for the average 18-pound pumpkin. In turn, they charged \$0.19/lb which would have been \$3.42 for 18 pounds. By comparison, Wal-Mart sold all sizes for \$3, which would have been about the average price for one of our pumpkins. We were able to sell all sizes for \$4 at produce stands; almost twice the profit selling to grocery stores. If we were to sell by the pound, charging \$0.25/lb, we would have made \$4.50 for 18 pounds.

There were a lot of requests for pie pumpkins, although the majority of our customers preferred the large jack-o'-lanterns. This season we did not grow any small varieties that are favorable for pumpkin pie, but we were able to sell some of our smaller carving pumpkins as Sweetie Pies. We delivered bins with mixed pumpkin sizes, but customers liked the option of selecting the size of their choice so they knew what to expect. A bin of large pumpkins held 25 pumpkins weighing 15-20+ pounds, a medium bin held 50 pumpkins weighing 5-15 pounds, and small pumpkins averaged 2 pounds. Big pumpkins are obviously the most valuable, they should be sold no less than \$0.20/lb.

Winter squash was our first success. We planted early, seeding began in the greenhouse May 13, and all of our winter squash was transplanted or direct seeded in the field by June 6. By the time it was ready for harvest in September, we had months of practice behind our backs, not to mention a worksheet that explained the various types of winter squash and the method of harvesting. We planted an appropriate amount of seeds to keep our roadside stands supplied, and we had plenty more to sell elsewhere. Winter squash were generally sold in grocery stores \$0.50/lb, which was \$2-3 on average, the same price we sold them for at farmers' markets and roadside stands.

Acorn squash was an immediate hit, probably because it was most recognizable. Butternut was the quickest to sell. Spaghetti and buttercup squash were popular, which was no surprise because they are the two most frequently used in recipes. Kubochas, closely related to buttercups, looked like mini pumpkins. Carnival dumpling squash also looked like pumpkins, camouflaged with colorful patches and flecks of dark green, light green, and orange. Our other dumpling squash, Delicata, did not sell and neither did our Hubbard squash. Hubbards were too enormous for the average vegetable lover, weighing more than 20 pounds at times, but an adventurous few were willing to dish out as much as \$10 for a big one. In grocery stores, they are sold in quarters or halves.

This season's biggest dud was our berry crop fiasco. Berry planting stock went into the ground May 20 to June 10, a full month later than in 2002, planted April 23 to May 11. Harvesting began in the first part of July, and by the middle of the month, we already had a problem with the raspberries as disease was spreading through, causing the canes to rot and die. Presumably, the cause was swampy irrigation, and we had to shut down all watering operations on the entire 30 acre berry field, including the new planting stock. Soon after, we had to stop picking berries altogether, and the 10 acres of newly planted berry shrubs dried up

like sunburned skeletons. If this year's berry plants did not survive the summer's heat and lack of water, our berry crop will be another two years behind. Twelve berry crops are listed on our organic certificate: blueberry, cherry, chokeberry, cranberry, currant, elderberry, gooseberry, lingonberry, raspberry, saskatoon, sea buckthorn, and strawberry. We will be lucky to have any in 2004.

Our raspberries were a disappointment for several reasons. First, the berry itself was very small, so it demanded a lot of time to pick. We had to ask a higher price than we might have with a bigger berry simply because of the harvesting cost. Then, the canes were infected with a swampy over-watering disease, followed by a drought that nearly cleared them out. The situation with our raspberries will be fixed next year, as long as the canes survived the summer of 2003. Bigger berries will be easier to pick, and minimizing picking costs will make them more profitable.

Customers asked for berries at farmers' markets licking their lips. From an economics standpoint, fresh, local, organic berries were in high demand and low supply, thus elevating the price and making them extremely valuable. However, our raspberry situation opposed the scientific rule. Before our berries dried up, we were able to catch a sneak peek at the marketing potential. We found that grocery stores were sometimes willing to pay \$4 for a pint, and farmers' market customers paid \$5, but these people acted like they were getting ripped off. In reality, \$5 for a full pint of berries was 37 percent cheaper than paying \$3.99 for a half-pint at Albertson's. The only difference was the size of the packaging. In reiteration, berries should be sold in the half-pint size that is comfortable for everyone.

Cherries were a different story. No, the same story but a different book. We sold Flathead cherries \$3/2lb and customers lined up for them, the price was a bargain. People were especially impressed when we had them chilled on ice. Customers at produce stands preferred to fill the 2lb clam containers themselves rather than having them prepackaged. Our only concern with cherries was the shelf life. Cherries didn't last a day in the sun, but they lasted up to three days with shade, watering, and rotation. We were able to keep our cherries fresh at the farm by storing them in the coldest part of the warehouse refrigerator.

Nectarines, peaches, and plums were good as long as they were not bad. Um, that's an obvious statement. These fruits came to us from Spokane, WA, and a good amount of the peaches were actually moldy upon arrival. In a matter of weeks, all that remained were tasteless fruit that had to be composted. Still, the produce stands were able to sell a lot of good fruit while it lasted. In order of popularity, plums were an excellent seller, followed by peaches,

then nectarines.

Apples and grapes arrived in October and we purchased them from local growers. We paid \$0.60/lb for apples, selling them five for \$1. Grapes cost us \$1/lb, and our customers paid \$1.50/lb. The trouble with apples in the valley was that everyone and their dog's cousin's grandmother had apple trees in their back yard. At any rate we made our money back, plus the added traffic that the fruit brought in.

Herbs are a hot commodity used in culinary, landscaping, medicinal, and other purposes. The farm-level value of herbs produced in North America is growing at a rate of at least 10% annually¹³. Herb production in the U.S. is dominated by those used in food preparation, although herbs used for medical purposes are on the rise. This season there was a large market for Basil, the only herb listed on our organic certificate. It complemented some of our other vegetables, along with being a good seller by itself. The leaves needed to stay cool and dry because they were highly perishable, fresh basil lasted up to one week if kept in a clean cooler. We sold basil by the pound, cramming the leaves into clamshells. If we continue to grow fresh herbs, our packaging method could be improved using flat, wide containers that allow us to lay out the leaves neatly. Additionally, dried herbs may be a hit in the off season.

This season we did not grow garlic, nor did we try to sell another farms' garlic, so it is difficult to say if it would have been profitable for us. What we do know is that there are persistent messages about the health benefits of garlic, and no other vegetable has experienced stronger demand growth in the past 10 years¹⁴. Garlic may be a good crop to add to our repertoire. According to our salesperson, Deb Keep, elephant garlic is choice. She said that garlic is a money crop, not to mention that it would complement a lot of our other vegetables. In 2004, we need to supply our stands with garlic, which means we will need to find a grower. There are at least three farms in northwestern Montana who grow garlic. They are Purple Frog Gardens in Whitefish, Glenwood Farm in Polson, and Loon Lake Gardens (Organic) in Bigfork. If organic garlic is lucrative, we should consider planting some next fall, October 2004.

In early September, something unusual started to happen in the field. Some curious shapes appeared, bustling. They grew on vines, obscure in form, chameleons of color. There were gigantic green apples and yellow, warted pears. Orange mushrooms were blooming like bomb clouds. Upon first sight, our harvesters freaked

¹³Hartsook

¹⁴

out! They started chopping swans' heads off, and breaking their necks. They were beating each other with cavemen's clubs.

I am speaking, of course, of *Invasion of the Body Snatchers*. No, gourds. Each gourd had its own personality. They were never blemished, never misshapen, always bizarre. Large gourds were 12-18 inches long, and small gourds were 4 inches or less. Size was no indication of ripeness, instead it was the vine that told us when a gourd is ready to be picked. The first time we harvested gourds, our pickers wiped out a quarter of our entire crop, most of which were not finished growing. It was extremely discouraging because our supply was so few to begin with. In order to try and prevent harvesting them too early, we designed a worksheet and posted STOP signs in the field. And yet, the gourds were still picked early. The fact that we were still so intensely eager to harvest them, even after all of our efforts to be patient, is a testament to the immense popularity of our gourds.

One of the value-adding characteristics is that gourds may be preserved for hundreds of years after they have been dried. Gourd drying is a natural process that requires no labor, and finished gourds are simply dried and then stained. Beriswill Farms in Ohio sells apple gourds \$1.50 green, \$3 dried, and \$10 finished. They sell birdhouse gourds dried for \$6 and finished for \$10. They also do some hand painting on dried gourds, raising the value to \$25.

Common Ground's best selling gourd was the Speckled Swan, also the most fragile. The neck snapped easily if it was not picked or handled with care. Gourds needed to be cured in the sun to harden the shell and reduce the fragility. Our birdhouse gourds also sold well, as did the apple gourds. We reserved dozens of apple gourds for the Macintosh Apple Days festival in Hamilton. Some of our other gourds were turbans, dippers, and the smaller, ornamental mix.

At our produce stand in Lolo, customers were somewhat hesitant to buy gourds because they did not know what to do with them. So we created an informative sheet about gourd drying. In addition, we made recommendations at farmers' markets about using gourds for useful purposes such as birdhouses, bowls, dippers, and maracas. Small ornamental gourds sold for \$1, apple gourds were \$3, birdhouse and swan neck gourds were \$5-8.

Sunflowers were an investment for our produce stands. This season we planted five varieties of sunflower, including the impressive Moulin Rouge, but we harvested very few. We rarely made use of them in our stands, even though we had enough to keep them supplied through August and September. Fresh ones should have been harvested just as the flowers were beginning to

open, leaving 2 feet of stem, and they could have been preserved by hanging them at the stands or using silica gel.

Another flower we planted was nasturtium, whose entire blooms are edible. They tasted sweet and mildly spicy. The blooms were 1½-2 inches in scrumptious shades: mahogany or cream. If we were able to harvest enough of them at a time, the upscale restaurants in Missoula would probably love to garnish their salads with them. Edible flowers such as sunflower and nasturtium are desirable in conjunction with other items such as cut flowers and herbs. The negative factor is that nasturtium needs to be consumed within a day or two of harvest.

We devoted the largest acreage of our farmland to sweet corn, our specialty. With more than 14 acres planted, we harvested it steadily through August, delivering about 20 bins a week at its peak. Corn had a shorter growing season than almost any other crop, but strategic planting made it possible to harvest over a longer period of time. The first section of corn, planted May 20, was ready to be harvested by the end of July. The next section was planted June 10, ready in mid-August, and the last section was available for harvest until the end of September.

Corn seeds were not overly expensive, and harvesting was a snap, but the cost of organic production escorted by the severely hot and dry weather made it difficult to sell at a competitive price. Corn required the perfect combination of heat and water. Too much or too little was a killer. As an illustration, the first corn seeds we planted needed to be protected from the cold, so we covered them in plastic. We left the plastic on top of them for a week or so, and one of those days was so warm that it cooked the seeds until they rotted. Another serious issue was irrigating the corn. Every irrigation shift was imperative, every slip was a disaster.

After harvesting, our focus shifted to shelf life. From the moment it was picked to the time it was delivered, sold, and cooked, corn was a rush. Our fresh corn was awesome, crisp and high in sugar, but these qualities decreased quickly as it grew older. The life span was very short. We made efforts to stretch the shelf life, sprinkling water on top of the corn to keep it cool, but it was no match for the hot sun. In August it lasted only a few days. To make matters worse, some of the corn in our produce stands was getting too much water without sufficient rotation in the bins, causing it to become moldy.

We found that there was rigorous competition with other farms selling conventional corn at a lower cost. Hutterites sold theirs to retailers for only \$0.10/ear while we charged \$0.18/ear. Even Charlie's Produce, one of the formidable distributors in the greater Missoula area, sold conventional sweet corn in season at a

higher price, 18 to 20 cents. Regardless, grocery stores like Orange Street Food Farm complained every week about the price of our corn, unwilling to pay more for a superior product. Common Ground organic sweet corn was unquestionably among the best in Montana. Ours was the Harley Davidson of corn.

Corn is versatile crop. Not only are the ears edible, but dried corn husks are often used in cooking. They are primarily used in making tamales, but they are also used to wrap other foods for seasoning such as catfish or salmon. Latin markets sell dried corn husks packaged in 16oz bags, approximately 200 husks for \$4.50. Ornamental corn is inedible, but it would be a good compliment to the decorative gourds and pumpkins we sell in the fall. Also, corn stalks can be sold. This year we sold bins of 75 corn stalks for \$41.25, or bundles of five for \$3 or less. In October, Common Ground had 14 acres of corn stalks that could have been used for something productive. Mazes and haunted hay rides earn money from admission charges as well as from the sale of the corn that comprises the course. Scarecrows are a must.

ADDITIONAL MARKETING ENDEAVORS

We encountered a lot of the boring aspects of the produce industry this season, such as the conservative farmers' market board members who said, "We do not want to grow." Common Ground wanted to bring organic produce to the masses and liberate the tired, old grocery store managers. Trying to introduce new products to our customers, we designed recipe cards. We created a comic strip, called *An Eggplant Named Sue*, because we wanted our price list to be more appealing to produce managers. By definition organic food is grown the old fashioned way, using no chemicals, but that does not mean that it can't be marketed in a creative way. I would like to see more originality in our marketing.

There are thousands of additional ways for us to market our produce. Street vending was always an option. All we needed was an inexpensive vending license, a great spot to sell with permission when necessary, and people passing by. A week after the last farmers' market, October 25, we sold pumpkins on the corner of Higgins Street and Pine in Missoula. People were stopping by just to take pictures, saying, "That's a great display. Your pumpkins look awesome."

The Western Montana Fair, in Missoula, has been celebrated every year since 1876, awarding blue ribbon prizes for the best vegetables. One of our farmers' market customers told me that our vegetables looked better than anything she saw at the fair this year, suggesting that we try and win a blue ribbon next year. Then we could say, "Voted best of show at the Western Montana

Fair.” There was another festival in Hamilton, called Macintosh Apple Day. We were there on October 11, selling vegetables and apple gourds. We invested \$50 for a booth and earned \$306. There are dozens of fairs and festivals that we could attend in northwest Montana. One of our stand attendants suggested we start a new one: Veggie Fest.

Trading and donations allowed us to give something extra to the community. We traded services with Jocko Valley Embroidery, who embroidered the hats and aprons for our produce stands. In exchange, we promised to design a new logo for them and print it on a billboard. We donated a half-dozen bins of pumpkins and corn stalks to the Barnburner, a Halloween festival with 15 local bands. The Barnburner crew used one of our produce stands with a 6-foot Montana Fresh and Local™ logo and put our logo on their T-shirt, adding to the promotional exposure. Common Ground was also able to contribute to the Missoula Food Bank with 575 pounds of winter squash in November. The Food Bank served over 21,000 people this year, 40 percent of which were children, and 6,800 pounds of food were donated by farmers’ market vendors.

Advertising was paramount in creating brand equity with our new Montana Fresh and Local™ trademark. We used the logo on our labels, and we featured it in all of our print ads. We taped fliers on storefront windows near our roadside stands, and we ran four print ads in the Missoula *Independent*, Montana’s largest weekly newspaper, late in the season. The *Independent* has a weekly circulation of 20,000 and is read by three-quarters of all adults in Missoula. The cost was \$250 for a single 1/5 page display ad, including original layout and copy design from the *Independent* staff. Radio may be a more affordable way for us to reach our target audience. For decades, Ben & Jerry’s has relied on only two methods of advertising: radio, and a van they call the “Cowmobile.” Similar to Oscar Meyer’s “Wienermobile,” the Cowmobile is in the shape of a cow and it drives around the country, giving away free pints of ice cream.

Our Montana Fresh and Local™ and Common Ground Farm logos were well received. We used the Montana Fresh and Local™ logo like a stamp of approval. Montana Fresh and Local™ stickers appeared everywhere, from the packaging to the walls of our roadside stands. We put the logo wherever we saw fit, on our hats at farmers’ markets, in our print ads, on the vegetables themselves, and we plan to put it on our delivery truck as well. We also plan on laminating vinyl labels for storefront windows. We may want to sponsor a sports team, like the Missoula Osprey or a Parks & Rec softball team. If we silk-screened 100 T-shirts, we would have smiling, smelling advertisements.

Two Web sites were designed in order to reach parties that were otherwise inaccessible. Our intent was to promote Common Ground Farm and to assist our customers in the decision-making process. The first Web site was a family-oriented glimpse at the farm itself. At www.mtcommonground.com, we offered an introduction to the farm with community links, photos and recipes. The other site, www.mtfreshandlocal.com, was a business-oriented site targeted at produce managers and other retailers. The Montana Fresh and Local™ site featured a description of our products as well as a Price & Availability list that was available only to our customers.

We may want to design an informative brochure that explains Montana Fresh and Local™ and its products to retailers. The standard, six-sided brochure consists of a front and back cover, the inside front panel, and the inside three-panel spread. The front cover may include the logo, company name, and slogan or tag line that provides a “hook.” An example of a tag line that would work for our purposes is “Tastefully Yours.” Contact information usually appears on the back cover, and sometimes the space may be used as an envelope for direct mailing. The inside front panel is the best location for our main selling points or a testimonial; the most important panel of the piece. When the brochure is fully opened, there are three panels to write a description of Montana Fresh and Local™ and what we have to offer.

Next season, we plan on reaching more of our customers through direct-mail and email. We will send thank you letters and newsletters to customers and all contacts. We have assembled a mailing list of customers from the Bonner Produce Stand, and there are a lot of interested parties. The letters would describe life on the farm that particular week or month, and following the story, it would list the produce being harvested. The *News of Common Ground* would go to friends of the farm weekly via email. Newsletters could feature our comic strip or something that encourages readers to scroll through.

This season was marked by surprises, like the distinctly erotic shapes in some of our vegetables. There were butt-shaped gourds, nipples lemon cucumbers, and wiener-shaped squash. At the start of the summer, one of our workers smashed the tractor into the power line pole and knocked it over, setting a tree on fire and cutting out power for an entire day. A month later another tractor driver snagged a wire from the power line and nearly pulled over a second power pole. The epitome of surprises arrived when our farm manager, Tyson Miller, brought some corn to sell at a University of Montana Grizzly football game. Unexpectedly, his

sign for sweet corn was exactly the same colors as the opposing team's jerseys, dark green on yellow.

Common Ground Farm tried to put itself on the map in 2003, and my impression is that we are now plotted somewhere between the Land of Milk & Honey and Candyland, which is better than Nowhere Land, where we began. We made a lot of good and bad decisions this season, and whether or not we learn from our history will determine whether or not is a success. There are two primary improvements that need to be made in 2004. We can start by learning about the needs of our customers, then giving people what they expect, and exceeding those expectations. This can only be achieved by delivering a consistent product. The word, consistent, appeared nine times in this document, and it could've easily been 90. The second improvement will be to grow what we can sell instead of trying to sell what we have produced.

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