Alaska Seeds of Change
Demand Study

Prepared for:
The Foraker Group

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Key Findings

McDowell Group was contracted as part of the Foraker Pre-Development Program to conduct a study of the potential demand for fresh produce in Anchorage, in support of the Alaska Seeds of Change (ASC) project. ASC will utilize a hydroponic greenhouse operation to provide at-risk youth (age 17 to 22) from urban and rural Alaska, opportunities to acquire independent living skills and real-world experience necessary to function independently in their communities.

Development of this type of project is timely. Across the nation and globally, there is increasing recognition of the importance of developing local food production systems. Economic, environmental and health concerns all contribute to the movement to “grow locally.” With roughly 90 percent of the food consumed in Alaska being transported from places as far away as Peru, the market for locally grown, fresh produce is underserved. The study team conducted more than 45 interviews with knowledgeable individuals in five produce market sectors (restaurants, grocery stores, institutions, wholesale distributors, and farmers market participants) to determine potential demand. The follow is a summary of the key findings of this study.

Demand

The demand for fresh produce in Alaska greatly exceeds what current producers can supply, and there is significant potential for ASC to enter this market.

- Interviewees stated clearly that demand exceeds supply in virtually every market. Nearly all those interviewed agreed that fresh Alaska produce is perceived as higher quality than produce shipped to the state. There is also a perception that locally grown food is healthier for the consumer, as well as better for the environment, because less transportation results in a substantially smaller carbon footprint. Many of those interviewed expressed great interest in having a year-round source of locally grown produce.

- As more fresh Alaska produce becomes available, it will likely facilitate even further increases in demand as consumers become accustomed to higher quality fresh products.

- In addition to confirmation of potential demand, the study team reviewed national statistics for per capita produce “acquisition.” Even at maximum production levels, ASC would not exceed a market share of 16 percent for lettuce and 8 percent for tomatoes in the Anchorage market. As ASC will likely be producing three to six different products, the market share for each product will likely be much lower for each item. Therefore, it is clear that there is sufficient market demand for all ASC production and that such production will not disrupt or displace other providers of fresh produce.
Quality, Consistency, and Price

*Product quality is the most important factor in product purchase decisions for all market segments.*

There can be no compromise in product quality. All market sectors rate quality of the product as the most important consideration. Consistency in product appearance, availability and volume are the next most critical components. Price, while always a consideration, is not necessarily the determining factor in purchasing local produce. There is some willingness to pay a slight premium for local produce, especially when the cost of transporting produce to the state is considered. Lettuce prices seem more competitive than those for other items.

Product Distribution

*ACS should plan to distribute the vast majority of its products through wholesale distributors.*

The study team recommends that ASC work with one or more wholesale distributors with the goal of selling a substantial portion (roughly 90 to 95 percent) of production through this market to establish a stable income base. Working with these vendors will provide access to most of the institutional and restaurant markets, and some of the retail markets. This approach precludes the need for a significant one-on-one sales and marketing effort with multiple customers. ASC cannot sell to wholesalers and directly to their customers.

- ASC should also participate in farmers markets to increase revenues and provide additional training experiences for the program’s youth. For planning purposes, estimated sales at farmers market could be in the range of 3 to 6 percent of production.

- After the operation is running smoothly, ASC may wish to explore the possibility of selling its products as “boxed” fresh produce. Community Supported Agriculture programs (CSA’s) combine fresh produce from multiple producers and sell to subscribers who receive weekly shipments of boxed produce. ASC should investigate working with CSA’s currently serving the market.

- Another possible strategy for ASC is to run its own farmers market or operate a CSA directly from its greenhouse.
Product Mix Demand

ASC should consider beginning operations with a mix of three to six different products. Based on the results of the market demand interviews and discussions with CropKing, the following products appear to have the greatest potential, ranked by demand, ease of production and potential profitability. Further, this analysis suggests that ASC might consider diversifying into additional items. Demand is great enough for all of these products that ACS production should easily be absorbed by the market. According to CropKing, lettuce generates the highest revenue per greenhouse bay. The products with the highest potential include:

- Mixed baby greens
- Leaf and romaine lettuces
- Tomatoes
- Herbs, mostly basil, but possibly cilantro, mint, and spearmint
- Cucumbers
- Red and yellow bell peppers

Support for the ASC Mission

While generally supportive of the ASC mission, interviewees are unlikely to pay a significant premium to support that mission.

Overall, most interviewees were willing to pay 5 percent more for Alaska produce, some were willing to pay 10 percent, and few might pay more than that. However, willingness to pay is clearly related to the perception of fresh produce having a higher quality than to support the mission. The following statement was representative of most interviewees' opinions, “We all like to help, but my job is to support, not subsidize. It doesn’t have anything to do with who you are helping. It is the quality and consistency of the product and our ability to sell it.”

Nonetheless, there does appear to be segments (restaurants and farmers markets) where ASC will be able to increase sales through use of their mission as a marketing message. One component of an ASC marketing plan should be the development and testing of alternate marketing messages.
Introduction and Methodology

Introduction

The Alaska Seeds of Change project (ASC) will use a hydroponic greenhouse operation to provide at-risk youth (age 17 to 22) from both urban and rural Alaska opportunities to acquire independent living skills and real-world experience necessary to function independently in their communities. Goals for ASC youth include completing educational and/or vocational training, obtaining and maintaining permanent employment, and securing safe and stable housing. Under close supervision, youth will be employed by the operation and live at the facility. ASC plans to implement a social enterprise business model. The business component of ASC exists to support the mission of the program, not only by ensuring financial sustainability, but also by providing an important real-world setting for skill-building related to employment, communication, problem solving, teamwork, and leadership.

The primary goal of this study was to indentify the level of interest and potential demand in Anchorage for greenhouse-grown produce and identify which products have the highest demand potential. Secondary goals included identifying barriers to entry in the fresh produce market and defining the likely effectiveness of using marketing messages that highlight ASC’s social mission as a tool for increasing sales.

The five market sectors studied were designed to cover a range of produce markets and included restaurants (mostly fine dining), grocery stores (mostly large), institutional buyers (school district, prisons, and a hospital), wholesale food distributors, and farmers market organizers and vendors. It will be critical for ASC to understand the complexities of the fresh produce distribution system in order to develop sales strategies that provide a return on investment that leads to sustainability.

Methodology

The study team conducted more than 45 interviews with knowledgeable individuals in five produce market segments (restaurants, grocery stores, institutions, wholesale distributors, and farmers market participants). The list of interviewees was not intended to be exhaustive, but of sufficient depth and breadth to allow the study team to draw reasonable conclusions concerning fresh produce markets in Alaska. Some interviewees were more forthcoming in the level of detailed information they were able or willing to provide. Very few interviewees were willing or able to provide detailed pricing information for specific items for several reasons, including proprietary concerns, variability in prices, and the large number of potential products.
While the focus of the study was the Anchorage market, several interviewees lived or conducted business in Alaska communities other than Anchorage. Their experience and insights were still valuable and relevant to this project.

This research project had a relatively short timeline of about seven weeks. The interviews were conducted between September 23 and October 20, 2009. Summaries of the interviews are included in the body of this report. A list of contacts is included in the appendix, as well as a list of interview questions. Additionally, during the course of the study team’s investigation other valuable sources of information were obtained. A list of these sources is also included in the appendix.
Summary of Interviews

This section provides a summary of interviews conducted with restaurants, institutional facilities, retail grocers, wholesale distributors, and farmer’s market participants.

Restaurants

Preference for Locally Grown Produce

Sixteen chefs, restaurant owners, and kitchen managers representing 15 restaurants were interviewed for this study. Most of the restaurants interviewed were considered high-end operations that offer fine dining or specialty foods; a few were mid-range eateries with less upscale menus.

All but three of the restaurants involved use locally grown produce to some degree. Seven of those interviewed said they prefer to use locally grown produce and try to promote Alaska foods in their restaurants. Interviewees generally stated that they use local produce when they can, but supplies are limited. “If more were available, we’d buy more,” said one interviewee. This view was echoed by more than half of those who participated in this study. Most of the Alaska-grown produce they purchase is available only in the summer; many of those interviewed expressed an interest in having a year-round source for locally grown produce as expressed by the comment below.

If we could get produce that was Alaskan in the wintertime, that would be great. We really focus on Alaska-grown and Alaska-made foods. In the winter, we’re using fresh-made Taco Loco chips and things like that, but we can’t get any produce.

At the end of the interviews, people were asked if they had any other comments. Five of the 16 people interviewed responded that they were eager to see the launch of an operation such as ASC and the opportunity to buy local produce year-round.

All but one interviewee said that locally grown produce is perceived as higher quality. One person said local produce is not superior, based on a negative experience purchasing Alaska-grown lettuce that was “dirty and rotten.” Two people said that the quality depends on how the local producer operates and on the weather, which can be hard on produce.

In general, however, the perception of locally grown produce is very positive because it is believed to be fresher, without the time of transport from another state. Two restaurants said the concept of locally grown food appeals to their clientele. Below are additional comments about locally grown produce:

You can usually taste the difference. There is a huge difference in taste. The color is better and brighter. The flavor is usually 10 times better. With the carrots, you can really taste the difference.

Yes, it’s better. A lot can happen on the road. The quality is compromised if it gets stuck in Seattle for too long.
It’s obviously fresher. You don’t have problems of immediate rusting. But sometimes it’s not as clean or not as nicely shaped, not like a mass-market product.

I think people are becoming more aware of our carbon footprint and the distance food has to travel to get to Alaska.

It’s a lot fresher. The only trouble is they don’t last as long when grown locally. They’re just more delicate it seems like.

Menus in North Carolina are dictated by seasonal changes. I’d like to see that here. Once you eat watercress that’s picked the night before, you taste the difference and it’s hard to accept anything less.

Several people said that cleanliness is not always as consistent with local produce. That can be a problem because restaurant staff does not have time to clean produce, particularly lettuce and leafy vegetables. As one interviewee pointed out;

Another issue with local farmers is that the produce is just not processed. We need the stem and leaves removed. We need them to be cleaned. Logistically, we don’t have enough manpower to do that.

Preferences for Types of Produce

When asked what three or four fresh produce items they would most like to have grown locally, interviewees most frequently said lettuce, tomatoes, carrots, potatoes, and fresh herbs. Lettuce was the most popular of these items, being named 12 times, which was twice as often as the next most popular, tomatoes. Interviewees specifically listed romaine lettuce twice, baby lettuce twice, and spring mix or mixed lettuces once each.

The table below shows how often a type of produce was named when the 16 interviewees were asked to state the locally grown produce they would most like to have available.

<table>
<thead>
<tr>
<th>Most Requested Locally Grown Produce</th>
<th># of Restaurants Expressing Interest</th>
</tr>
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<tbody>
<tr>
<td>Lettuce</td>
<td>12</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>6</td>
</tr>
<tr>
<td>Carrots/Potatoes</td>
<td>5</td>
</tr>
<tr>
<td>Fresh Herbs</td>
<td>4</td>
</tr>
<tr>
<td>Arugula</td>
<td>3</td>
</tr>
<tr>
<td>Cucumbers/Zucchini/Green Beans/Beets/Bell Peppers/Spinach</td>
<td>2</td>
</tr>
<tr>
<td>Yellow Squash/Yellow Wax Beans/Radicchio/Asparagus/Broccoli/Onions</td>
<td>1</td>
</tr>
</tbody>
</table>

Four people said that they would like to be able to buy more unusual locally grown items, such as purple potatoes or purple cauliflower. Two said specifically that they would like less common varieties of lettuce to
be available, and two said vegetables should be chosen that reflect the region. One person provided the following comment about tomatoes.

*Put a brand behind the tomato. Don't just grow a hothouse tomato. Grow an heirloom tomato that hasn't been chemically engineered. If they can take on things that have a Northern feel, that would be marketable.*

Comments by interviewees included the following:

*I'd get arugula—4 to 6 pounds/week. We use a lot of basil, cilantro, parsley, thyme, chives, tarragon. A pound a week for each of those.*

*Spring mix — 18 to 30, 3 pound boxes. Romaine — 4 to 6 cases. Arugula — you need to find something that's useable. We have to wash it and clean it, as opposed to getting Romaine hearts, which are ready to use.*

*If they could do a mixed box of lettuces, radicchio and arugula, or different small lettuces combined — salad mix, spring mix, or mesclun mix — that would be good. I use mesclun mix a lot. If you could develop a mix, I'd use quite a bit of it.*

*If you could grow asparagus, you could retire. Berries are a little fickle, but if you had the right people putting effort into it, I know we'd buy them if we could get them consistently.*

*It would be good to have things that are representative of the Pacific Northwest, like radicchio.*

*What I'd really like are those purple potatoes or purple cauliflower — things that are alternative.*

Most of the local produce purchased is grown in the Matanuska-Susitna Valley. Potatoes, including Yukon Gold, red, and purple varieties, are the most commonly purchased local produce item, followed by carrots and then lettuce. The amount of potatoes purchased by each restaurant varies from five to 300 pounds per week. Carrots are bought in quantities that range from 20 to 160 pounds per week, and the amount of lettuce purchased ranges from two to 11 cases per week. Anchorage-area restaurants also use Alaska-grown beets, tomatoes, mixed greens, zucchini, yellow squash, cucumbers, mixed greens, broccoli, and mushrooms, according to the interviewees. Several said they like to buy more unusual items.

Eleven of the 15 restaurants that participated in interviews would purchase lettuce locally or do so already. Two interviewees said they would not purchase Alaska-grown lettuce and one was not sure. Reasons for not buying locally grown lettuce include price, cleanliness of the product, and loyalty to a longtime distributor. “I get all my produce from Charlie's Produce. I've been dealing with him for 20 years. I'd hate to get my lettuce from someone else,” one interviewee said.

Romaine was the most popular type of lettuce, with 10 restaurants saying they would purchase it in quantities that ranged from one or two cases a week up to 15 cases. Green leaf, baby lettuce, spring mix, iceberg, and mixed greens are also used. Two people said they prefer to use arugula.

Some expressed an interest in another source of Alaska lettuce. “We'd love local lettuce. We use mesclun greens, romaine and spinach,” one interviewee said. Some stated concerns that lettuce is readily available,
inexpensive from other sources, and comes very clean, as opposed to locally grown products, which can be time-consuming if they require washing.

Restaurants were evenly split on whether they would buy peppers, and most prefer red peppers or a mix of colors. Dining establishments that would buy locally grown peppers use from two to 30 pounds per week. Those who would not buy peppers locally largely said it was because they could get them cheaply from Costco or the Lower 48, and it was not worth paying extra for an item that would mostly be cut up and mixed into other dishes. As one interview put it:

> There's items like celery and bell peppers that are part of a meal, but they're ordinary. You can get them anywhere. They are not a memorable part of a plate. There are certain items that are unique, like multi-colored cauliflower or purple potatoes. Bell peppers are not too special. Take eggplant, beautiful white bulb eggplants, okra, tomatoes — those would be worth it.

Eleven of the restaurants participating in interviews would purchase locally grown basil while four would not. Weekly amounts of basil purchased by those eateries that use it range from a quarter pound to six pounds, with a common quantity being two pounds. Below are comments regarding the purchase of herbs.

> I'd buy it if you can keep it cost effective. But it's got to be priced right. About $8 a pound is what we're paying.

> I would like to say yes, but we go through a quantity that's so big. If you could take over my sage and thyme too, that would work great. To just go for one herb from you doesn't logistically make sense. We would want to buy most of the herbs from one place.

**Product Pricing**

When asked how big a factor price is when purchasing produce, nine interviewees said it was a major factor, six said it was a minor factor, and one said it was not a factor. Many said that they are willing to pay somewhat more if the produce was high-quality and if it had additional value, such as being an item that is memorable to the restaurant customer. Below are some of the comments people made when addressing the importance of price:

> It's a major factor. Add one cent and it ends up being a lot because of our volume.

> It is a major factor. It all depends on price. I'm not going to charge $25 a salad. It comes down to the pedigree of what we're talking about. If it comes from a local farm, we can tell people that. They're becoming more aware of the carbon footprint issue; we can tell them it's more of a farm-to-fork program. There is value to that. We would be more willing to pay for that.

> It is a factor. But we make a lot of choices that cost us more money if we feel there's a value there. It's not the deciding factor.

> You need things that are going to finish a plate. We'll pay more to get something premium, but it has to make a mark on the plate to a guest.
Price points have to be there; I have people to answer to; if it were my restaurant I would definitely buy local, but if price isn’t there, my boss would never sign off on it.

Of the 16 people interviewed, 14 said they would purchase locally grown produce if it were the same price as that shipped from out of state. One person said he would not purchase it because of a past experience with local vegetables that was negative; the other person said he would not buy it because he preferred to continue buying from his current source.

Interviewees were asked whether they would pay 5, 10, and 20 percent more for locally grown produce. Nine said they would pay 5 percent more, three said they would not, and four said they might, depending on quality. Three said they would pay 10 percent more, but another eight said they would consider it if quality were high. Four people said they would not pay 10 percent more. Only one interviewee said he would pay 20 percent more for locally grown produce, while 13 said they would not. Two people said they would pay as much as 20 percent more, but the quality would have to be excellent. “Overall, food costs have to be maintained. So we could do it for exceptions, but not always,” one chef said.

Interviewees were evenly split on whether the price of local produce varies significantly from season to season. One person mentioned that prices tend to start out high at the beginning of the season and drop as it progresses.

Availability and Consistency

Availability

Chefs and restaurant managers repeatedly emphasized the importance of consistent delivery. Immediate communication when an expected item becomes unavailable is extremely important, because a restaurant does not want to run out of items listed on the menu. Ordering produce from the Lower 48 can take up to a week for delivery, leaving the kitchen unable to prepare a dish customers expect.

Make sure when you say you’ve got those things, you’re really going to be able to produce it.

If you’re going to say you have it, have it. Keep up on the quality. We just started getting cream from Matanuska and they had some problems. It’s hard to plan things when you don’t get what you thought you were going to get.

Frequency of delivery is also important. Six people interviewed said they have fresh produce delivered every day of the week, four said they have deliveries three times a week, three said twice a week, one said three or four times a week, and another said five times a week. “There has to be constant delivery. We would want deliveries that are not just one or two days a week,” one interviewee said.

When asked how important year-round availability of produce items is, 11 interviewees said it was very important, three said it was somewhat important, one person said it was not important, and one person did not know. “I’ve never thought about that because everything I get is available always,” he said. Some people realized they had to live with a limited window for Alaska-grown vegetables because of the short growing season, but would like to see local produce available for more months of the year.
Yes, it’s important, especially with lettuces and herbs. But we do like to write the menu seasonally, and the menu changes accordingly.

I would like (year-round availability) to be more important. You come back to Alaska knowing you only have products certain times of the year.

Make your first priority year-round. If you could supply a beautiful field green year-round or even from June to September or October, you would have my business.

One chef said that getting local produce year-round would be especially helpful to his restaurant because it focuses on Alaska foods. “Last winter we really struggled to keep Alaska products. The last couple (summer) months have been great,” he said.

Important things are price and the service. Sometimes we order the Alaska-grown produce, but it’s not consistently available.

Consistency and quality is important. Consistency in size, peppers coming in at the same size and beautiful, delicate little greens.

**Barriers to Entry**

Competitive prices, consistent quality, availability, and a trustworthy delivery system were most frequently mentioned when interviewees were asked what the biggest barriers are for local produce growers attempting to enter the market. Several people said the ASC would need to produce large enough quantities so that they can rely on ASC to meet all their needs for that item, so they don’t have to patch together purchases from multiple sources.

One chef said consistency between each piece of produce is especially important to the restaurant business because items need to look similar on the plate when multiple people order them. “Consistency means size,” he said. “I was cutting up peppers for presentation. I would stuff a bell pepper and each time it goes to a customer, it needs to look the same. I would have to have the understanding those peppers are coming in at the same size.”

Below are some of the responses when asked about the biggest barriers for entering the market:

Consistency, delivery and price. We have such a good rapport with Ditomaso’s. I leave a voice mail at midnight and the next morning everything shows up. If something’s not right, they send it out right away. When we need something, they get it to us. They have the chain of communication and delivery already in place. It takes a lot of communication and convenience for me to make the switch.

Price and availability of certain items. A single produce purveyor makes things much easier. If you get everything with one delivery, there’s less paperwork, less time to check-in.

I think, for us, we need consistency. That’s been one of the most difficult things with getting things from the valley. Availability is a lot more difficult. When you’re buying from Lower 48, from Charlie’s, what we get is more consistent.

I need to go with a larger-scale farmer because I can’t change the menu partway through the week.
People have established relationships with farmers. You need to find out what’s not available and fill a new niche. If you’re growing arugula or tomatoes and corner the market, then you’re creating your own market niche.

The biggest barrier is competition from the big companies. Delivery schedules (with local vendors) have been a problem. Some places only deliver a minimum amount or only two days a week, so sometimes if you need something the next day, it’s hard to get.

If you go to a market in San Francisco, it’s all about the farms, the growers. The farms are as popular as the restaurants. In a San Francisco market, you go into a restaurant and they have a specific tomato from a specific farm — there’s value to that.

Produce the finest product you can. Don’t send a great product to get your foot in the door, and then change it. You need to have a reputation and keep it.

**Relationships with Customers**

During the course of the interviews, chefs, kitchen managers, and restaurant owners indicated that good communication and a positive professional relationship between the ASC staff and restaurant staff are very important.

Two interviewees expressed concern about remaining loyal to distributors or farmers they have worked with for years. They have developed professional relationships to which they feel loyal, indicating that fostering such a relationship with customers is important and developing a strategy for that may be critical to entry in the market.

Below are comments by interviewees on how to improve public relations with potential ASC customers:

*After you get started, do a little open house for all restaurants to see the facility.*

*I think it’s important to have a good person go around as a sales rep and really talk to all the chefs, let them know what’s available and what the quality is like. It’s important to have someone chefs can talk to.*

*It’s good to have face-to-face relationships with people. Sample them on things you’re trying to sell. The proof is in the pudding and people like to see what they’re getting.*

**Support for ASC Mission**

Eleven of those interviewed said they would be more likely to purchase locally grown produce from ASC because it is helping at-risk youth. “We want to promote Alaska business and Alaska products. We want to promote Alaska people,” one chef said. Three interviewees said a worthy cause would not play into their decision-making when purchasing items for their restaurants, and two were uncertain about whether the nature of the project would encourage them to buy from ASC.

Below is a sampling of comments related to ASC’s mission and buyer’s purchasing decisions:
Knowing it’s grown here in Alaska would be the major factor. We’d advertise that it’s at-risk youth growing it. We like to advertise which farms we get foods from. If it was helping youth, that would be a big factor.

It would be a good motivator.

It would help. I’m responsible for the way the food looks. If the quality is inferior, I’d have to go with a better product.

I buy based on quality. It’s got a good message, but I charge $22 for a large salad. I’ve got to make sure it’s spot-free and high-quality.

### Institutional Facilities

The study team completed 7 interviews with representatives from three organizations. Two interviews were conducted with representatives of Providence Hospital, two with Alaska Department of Corrections staff, and three with the Anchorage School District (ASD) procurement office. Providence and the two Corrections facilities buy produce solely through wholesalers, while the ASD uses a bid process that allows wholesalers and direct sellers the opportunity to bid for the district’s business.

Each of the institutions operates their purchasing department in a different manner. Some strive to purchase produce at the lowest possible cost, while others’ primary concern is quality control. All of the interviewees were supportive of purchasing Alaskan-grown produce; however, some expressed the opinion that their systems made it difficult to support this objective. One issue mentioned was that institutions have fairly stringent requirements for quality. The Corrections Department requires that produce comply with USDA requirements. Providence has similar high standards. Interviewees mentioned that individual farmers may have difficulties meeting these requirements on their own.

**Providence Hospital**

Interviews were conducted with Providence Hospital’s Dietary Services Director and CEO. Providence purchases its produce from food wholesalers and does not buy directly from local growers. The hospital uses Ditomaso’s for whole produce and Charlie’s and Dito’s for processed items.

Quality control is a major issue for the hospital. All produce needs to meet hospital criteria for fresh produce. Products need to be consistent in quality and taste. There were concerns expressed by the food service manager that local products lack consistency and tend to be higher in cost. Consistency is extremely important and this was reiterated numerous times during the interview. The hospital spends approximately 20 percent of its food budget on produce. For the months of August and September, the hospital averaged about $33,000 per month on whole and processed produce.

Providence did express interest in using ASC produce at the hospital. Fresh produce is perceived as healthier and of better quality. However, ASC would absolutely have to meet hospital quality standards, provide a very consistent product and be reasonably close to the pricing of similarly available products. One possible option may be for the hospital to guarantee the purchase of a certain quantity of ASC produce through their current distributors.
Anchorage School District

The Anchorage School District buys significant quantities of produce from August through May on a bi-monthly basis. ASD reported spending approximately $560,000 for fresh produce in FY 2008-2009.

The district goes out to bid on a monthly basis and estimates it purchases approximately 2,700 pounds of produce per month. Included in the appendix of this report is a sample of the ASD produce request for bids. Suppliers can bid on some or all of the needed items. According to ASD, they can select who to buy specific items from. For example, Vanderweele Farms has sold carrots to the school district for the past four years. The contract to sell carrots begins each year in November. Annually, they sell about 12,000 pounds of carrots at $1.10 per pound. The contract has been renewed for the 2009-2010 school year. Other produce items are purchased from a variety of vendors including Charlie’s, Food Services of America, and Ditomaso’s.

The School District would like to see Alaskan businesses receive the contracts, and there is an Alaska producer preference in the ASD bidding process. Contracts are awarded to the lowest bidder.

Alaska Department of Corrections

Representatives of two state correctional facilities were interviewed. One was a long-time staff member at the Hiland Mountain Correctional Center, the other was a procurement specialist for the statewide corrections system.

The purchase of produce is split between the Procurement Office and the twelve correctional facilities in the state. Located in Juneau, the Procurement Office determines the price for produce, ascertains that prices are reasonable, and keeps facilities in compliance with contract terms. Each correctional facility is responsible for its produce purchases.

In 2009, the department established a contract price for locally grown broccoli, green cabbage, collard greens, lettuce, leaf lettuce and romaine lettuce. There is no established contract price for other types of produce. A copy of the established contract prices is included in the appendix of this report.

The Hiland Mountain facility purchases produce weekly through Country Foods. If available, Hiland Mountain has directed Country Foods to substitute Alaska grown produce. An interview with the food supervisor at the facility indicated some of the problems that institutions have with purchasing locally grown produce. Large institutions must ensure all produce meets USDA requirements. According to the food supervisor, Alaska farmers do not have the infrastructure in place to grade produce to these standards. He recommended that farmers establish a cooperative to warehouse, clean, and sort produce in preparation for delivery. He emphasized the farmers cannot do it themselves if they want to be successful in selling local produce on a larger scale.

Retail Grocery Stores

Preference for Locally Grown Produce

Interviews were conducted with representatives of five retail firms with locations in Alaska: Costco, Wal-Mart, Fred Meyers, New Sagaya, and Alaska Commercial Company. The retailers expressed strong support for local farmers and the use of local produce. One national firm stated, “Absolutely. We support the Alaskan growing...
community” and “We try to support local farms. We discontinue bringing in our products if local farms have it.” Alaska Commercial Company (ACC) currently only purchases potatoes from local producers; the other stores buy a variety of items. (Multiple attempts were made to interview representatives from Safeway but unsuccessful.)

Most of the retailers have centralized buying operations that purchase for multiple stores in the state. The stores purchase significant quantities of produce and herbs with the demand for local produce exceeding supply for many items. With one exception, retailers said they would prefer local produce because they are fresher, have a longer shelf life and there is a savings in the transportation cost. ACC stated that they felt local produce had a reduced shelf life: “Alaska produce does not have the legs to hold up well.” Asked directly if ACC would buy local produce if price was about the same as elsewhere, the answer was no.

**Product Quality and Quantity**

One feature that was very important to all retailers was product quality. This was stated repeatedly during the interviews: “Quality would be my number one concern.” Retailers find that most customers perceive locally grown produce to be of higher quality, and this results in higher turnover for local produce. The types of produce purchased vary and include items such as potatoes, herbs, and various kinds of lettuce. One firm commented they buy 100 pounds of tomatoes every week and run out. “I sell every tomato I get.” Another stated that farmers are fickle and “you can’t always get what you want.”

While retail operators were open about what products they carry, in general, the interviewees provided few specific details concerning the volume of local products they sold. One interviewee stated that his firm buys fifteen cases of lettuce (seven cases of red leaf, green lettuce and eight cases of romaine), twelve cases of broccoli, and three to four cases of zucchini a week.

Some of the major retail firms discontinue bringing in their products from outside if local farmers can provide the product in sufficient quantities. One example was potatoes, of which they purchase as much as 500 10-pound bags a week. Carrots are also produced in large enough quantities to seasonally satisfy retail demand at some stores.

When discussing specific types of produce, the retailers provided more detail on what they buy and what sells. Most of the companies have developed relationships with the producers they have worked with over the years. As one commented, “I stay pretty loyal to the guys I have” but added “if you had some produce to sell we may be interested.”

Types of local produce purchased includes tomatoes, lettuce, carrots, zucchini, cabbage, broccoli, potatoes, red/yellow/green peppers, basil, and root crops. Consistency and sufficient quantity is a factor in purchasing.

One smaller retailer commented on lettuce production in particular: “So many guys produce lettuce; find more of a niche. Different kinds of lettuce, like butter, arugula, or herbs would be great.”

Retailers insist that local growers be able to support all of the retailer’s stores. If a small grower has a minor amount of product to sell, they can’t buy it. If a customer goes into one store in an area and sees an item, it needs to be available in all the stores in that area.
**Requested Products**

Retailers were asked to list the top three or four fresh produce items they would like to see grown locally. The items varied by retailer with two firms mentioning tomatoes. Retailers are interested in being able to purchase produce on a year-round basis. Some said it was important, while others said it would be nice to buy local produce year-round.

Requested products included tomatoes, herbs, summer squash, potatoes, head lettuce, spinach, brussel sprouts, parsley, cilantro, and kale.

**Pricing**

Fresh produce prices reportedly do not fluctuate significantly on a seasonal basis. There were differing opinions on what role price plays in considering buying local produce. Some retailers said it is not a factor because prices are fixed under contract but others said price is a major factor. One firm considers value the primary factor and price as secondary.

Specific comments included:

*The price is fixed. We are going to pay the same as everyone else. Only time you get a price difference is when there is a glut. We’re not going to raise prices because it is locally grown but we want to keep our margin. Therefore the price can’t be too high.*

*Price is a factor. Prices in Alaska are comparable to the Lower 48.*

*We bring in local cabbage. The heads are not as big but we are not shipping them 3,000 miles either.*

**Supporting a Worthy Cause**

A majority of retailers reported a willingness to pay 5 to 10 percent more for locally grown produce with two saying they would even pay 20 percent more for local produce. In determining whether they would pay more some mentioned that it is hard for the local farmers and greenhouses to be competitive with price but make up for it with quality and longer shelf life. Interviewees stated that factors such as quality, quantity and availability also influence buying decisions.

Asked if they would pay a higher price to purchase local produce from ASC knowing it would help at-risk Alaska youth, retailers stated that this would not be a significant factor. Knowing they were helping the community was important and some noted they were interested in working with and helping to establish programs like ASC, but their first priority was operating a successful business which required quality, price and consistency.

**Barriers to Entry**

The following were mentioned as barriers to entry in the produce market.

- Ability to supply high-quality products on a regular basis is a critical factor and is essential to doing business with retailers.
• Weather can be an issue during the growing season. If it is a bad summer – cold and wet – this will have an impact on production.

• If ASC grows the same produce as the other farmers then they run the risk of being affected by market saturation.

• Insurance is an issue and getting the necessary coverage that retailers demand. National firms may have higher coverage rates ($1 million to $3 million) that could be difficult for small growers to obtain. A number of the companies commented that ASC would need to get licensed and bonded.

Building Relationships

Nearly all of the interviewees mentioned that they had relationships with local producers and that building trust was important. However, most also mentioned that they were not opposed to new products or suppliers.

The real factor is reputation. I know certain guys can be trusted with their products.

I have to stay with my guy, but if they (ASC) came up with a new specialty product I would be interested.

Wholesalers

The study team interviewed five produce wholesalers including two or three of the largest purveyors of produce in the state. These wholesalers, primarily located in Anchorage, supply military bases, hospitals, schools, correctional facilities, restaurants, and businesses in rural Alaska communities. Due to the competitive nature of their business, some of the wholesale firms would not disclose prices or quantities of items purchased. All mentioned that quality was important, as well as reliability of the product and price.

Preference for Locally Grown Produce

Of the five wholesale firms interviewed, all reported buying locally grown produce. They see value in buying local produce as it has a good reputation and is fresher: “Alaska Grown has a good name and is fresh.” One interviewee commented, “As long as it’s available and prices are competitive, we will buy.” A few of the wholesale vendors even travel to local farms to pick up produce. One wholesaler purchases, processes and packages local products. Three of five wholesalers mentioned year-round availability as being very important. Some of the buyers help promote Alaska grown produce and tell their customers when and where to purchase locally grown produce. Several vendors mentioned that fresh produce garners significant press coverage in-season. “Local producers have the media’s ear. Look at how much newspaper coverage they get during the growing season. It is huge! The retailers feel like they need to respond to this. It hurts because they see the raspberries at local markets and say, why you don’t have raspberries.”

Price

Prices can fluctuate from season to season. Only one interviewee stated they did not see price fluctuations. They noted that most people will try to average prices. There may be weekly changes but they are not usually significant.
The wholesale companies are split concerning how significant a role price plays in the decision to purchase local produce. Interviewees stated that quality is number one, consistency number two, and while price is important, they are flexible. Equally divided, some say price is a major factor and others a minor factor. Stating it was a major factor, retailers commented:

*If I charged farmers market prices, I wouldn’t be in business. I need wholesale prices.*

*There is not enough incentive for chefs to buy local unless it’s cost-effective.*

*Some Alaska farmers cannot compete with some produce that can be bought cheaper in California.*

When transportation savings are considered, one wholesaler said that “local lettuce is about a dollar less (per case) than what it takes me to ship it up from Tacoma.”

In general, retailers stated they would buy local if the price was not a significant factor, if the quality was there or it was a comparable product.

When asked if they were willing to pay more for fresh local produce, one vendor offered the following:

*Rule of thumb is, local product is going to run 12 to 17 percent more. There is getting to be a strong movement to buy local and the price is less of a consideration. What I’m hearing in Seattle is buy local, keep dollars in the local community.*

Two wholesale buyers said they would pay 5 percent and 10 percent more. One said they would even go as high as 25 percent to buy certain high-quality local produce. For some, price correlated to quality. If the produce was good quality, then it would make it easier to pay a higher price. Another commented they were unable to say unless they knew the specific item.

**Requested Products**

Large wholesale firms reported great demand for the following locally grown products: Alaskan “hothouse” tomatoes (Roma, cherry, and on the vine), herbs of all varieties, lettuces (romaine, arugula and mixed bay greens), spinach, peppers (red and yellow), mushrooms, baby squash, and cucumbers (especially English). Specific comments included:

*You would be better off doing baby leafs because of the cost, looking at cost per square inch. These baby mixes are big. That’s what I sell to the restaurants. That market has gone nuts over the last few years. It would be meaningless to grow head lettuce in a hothouse. It wouldn’t be economical. Baby leaf market — you don’t have a lot of people doing those.*

*We need a good, consistent herb grower. Basil is a huge item. I’m flabbergasted by how much we sell in herbs. Herbs are a good item. There are some local gardeners, but they don’t grow enough for wholesalers.*

**Supporting a Worthy Cause**

Most of the interviewees stated they support the communities where they operate and try to be involved. They would likely take ASC’s mission into consideration when making purchasing decisions, but business
concerns are still top priority. One individual offered that if they like what they saw and the people were credible they would buy it. The following statement was representative of most interviewees’ opinions: “We all like to help, but my job is to support, not subsidize. It doesn’t have anything to do with who you are helping. It is the quality and consistency of the product and our ability to sell it.”

**Barriers to Entry**

Vendors provided the following comments when asked about barriers to ASC entering the market. The following were mentioned as barriers to entry in the produce market.

*Food safety issues; there are local, state and federal rules and regulations that must be adhered to by growers. ASC will need to know understand and comply with all applicable laws.*

*If you are going to be growing significant quantities to supply your customers then you will need space to store your products.*

*Marketing is a barrier*

*Insurance can be an issue.*

*Price will be a factor and ASC will have to be competitive. Today even produce is part of the global economy so will have to take into consideration what is being grown and consumed in other parts of the world.*

*Just see what the big farmers are doing and do something different because we have tons of romaine and potatoes and carrots. Try to stay away from the norm. Customers want different colored potatoes, different colored cauliflower, fennel, baby stuff, baby squash, baby heads of lettuce etc.*

*We are concerned with quality and sanitation. Larger producers can put in sinks; sanitization and chlorine wash systems to deliver an uncontaminated product.*
Farmers Markets

Market Organizers

There are approximately 25 farmers markets in the state. Some are small and have limited operations, while the Anchorage Downtown Market is sizable, with 300 vendors and daily attendance of about 15,000. The study team interviewed the organizers of eight markets: four in Anchorage, one in Eagle River, two in the Mat-Su, and one on the Kenai Peninsula. The table below indicates the size and attendance of each market and the number of days per week of operations.

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<thead>
<tr>
<th>Farmers Market Organizer Interviews</th>
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<tr>
<td></td>
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<tr>
<td># of vendors</td>
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<tr>
<td>Anchorage</td>
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<tr>
<td>Anchorage Downtown Market</td>
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<tr>
<td>South Anchorage Farmers Market</td>
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<td>University Center Market</td>
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<td>Northway Mall Market</td>
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<td>Eagle River Market</td>
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<td>Other locations</td>
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<td>Palmer Friday Fling Market</td>
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<td>Wasilla Farmers Market</td>
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<tr>
<td>Central Kenai Peninsula Farmers Market</td>
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In general, the farmers markets take place from May through October, although some only operate June or July through September. Most markets are open Saturdays with about half open a second day (either Sunday or a weekday). The cost to rent vendor space runs from $5 to $75 per day. In addition to produce, some vendors sell items such as preserves and handicrafts. Most vendor sales are on a cash basis, but some vendors take credit cards. Two vendors mention that some also take WIC and Senior Nutrition coupons (which are reimbursed by United Way).

When organizers were asked which produce items were the most popular at the markets, the top items were potatoes, carrots, tomatoes, squash and lettuce. Other items mentioned were onions, snap/sugar peas, green onions, sweet corn, beets, green beans, kale, mustard greens, and strawberries. When asked what was difficult to sell, unusual Asian greens, kale, string beans, turnips, rutabagas, kohlrabi and squash (at times of peak abundance) were mentioned. All of the interviewees stated that fresh produce is perceived as higher quality than produce imported from elsewhere.
Comments and Advice for Alaska Seeds of Change

It takes good management and good workers.

Short season and fatigue are hard on the vendors/farmers.

Weather during the market can be an issue and affects sales.

Vendors need a critical mass for their displays.

Start out with only about four different types of vegetables and have plenty on hand, then you can go from there. Specialize. Don’t get overloaded, but have enough to attract people to your table.

Make sure vegetables are clean and containers are clean. Sometimes I have to pull people aside and tell them to clean things up. Use disposable latex gloves.

Present and display the produce well, have prices clearly displayed.

We’d love to see more produce on the market. The demand is huge. We just need more produce to come anywhere close to meeting the demand. Maybe they (ASC) even want to look at a market on site. You know the market is huge. We talk about it regularly. We opened up new ones and it still doesn’t meet the need. Spenard calls me. They want one over there. There just isn’t that much produce. There aren’t that many farmers. Year-round operation would be great for Anchorage. Grow some bibb lettuce.

They could sell green onions, radishes, above-ground crops. Fresh snap peas are one of the most popular things we have. They come in five and 10 and 20 pound bags. Pay $2 to $4 per pound. One thing you do get is a premium price. Corn is $2 an ear. Farmers sell out of it while Carr’s has the eight-for-a-dollar sale. Grow a lot.

(ASC) might even want to look at strawberries. They’re selling at $7 a pint at the market and they’re selling out. They never go home with a berry. They should consider flowers. Big demand for flowers. We work with refugees training as farmers. Teach them how to do certain things. They kept really good records. They did a higher profit on flowers than the produce. With very few flowers sold, they made a lot of money.

If they’re talking about a greenhouse operation, look at early crops or around-the-year crops. We did a survey at the Wednesday market. People asked, “why don’t you have a winter location?” The answer is, I have nothing to sell. One farmer sells potatoes, beets, and other cold storage items all winter long, but he runs out. If they (ASC) had a 12-month operation for lettuces or tomatoes, they’d be astounded at how much they can sell.

When you go the wholesale route, your price drops substantially. The farmers can make a real good living at the markets because of the retail prices. When we first got the market going, it was the first time some of the vendors/farmers made $30,000 a year. Now some of them make $100,000-plus and they deserve it. When they were making $30,000 or less, they were selling most of their product to Carr’s.
Most Eagle River Market vendors come from Palmer and Wasilla. We wish there were more produce vendors that would come. There is a need for more produce variety.

Stay with the simple stuff, remain seasonal. Every week you need to show that you have something to offer. Recommend you grow organic vegetables and work with growers who are assembling weekly boxes of produce for buyers.

Some of the things market goers are looking for that is not available are fresh vegetables that are washed, cut and ready to eat. Pre-made salads would also sell. One vendor sells homemade salsa.

There is wide support to help youth. Subscriptions to boxed vegetables may be the niche market to fill.

**Market Vendors**

Attempts were made to contact numerous farmers’ market vendors. Many did not return calls, were too busy to be interviewed, or did not wish to provide information about their operations. The three vendors that agreed to discuss their business – A.D. Farms, Dinkel’s Veggies, Glacier Valley Farms – sell at multiple farmers markets throughout the Anchorage area.

All operate on a cash-only basis with two growers considering the future use of credit cards. The growers see repeat customers, getting to know some on a first-name basis. One said “I have customers waiting in the morning to get what they want.”

**Types of Produce**

The growers vary in the products they grow but shared other aspects. A.D. Farms sells 40 different varieties of vegetables and fruits. While no one item is more popular than another, A.D. Farms does grow colorful carrots – purple, dark purple, white and yellow carrots, in addition to the traditional orange. This is something that sets A.D. Farms apart from the others. The farm also grows a variety of potatoes (peanut, Yukon Gold, white, red, French fingerlings), cabbage, brussel sprouts, beets, fava beans, green and yellow beans, peas, broccoli, cauliflower, and zucchini. Dinkel’s Veggies said they will grow just about anything that will grow in Alaska, including peas, carrots, lettuce, onions, potatoes, squash and broccoli. Glacier Valley Farms products include squash, corn, eggplant, green beans, strawberries, and cherry tomatoes.

**Demand and Price**

There was a consensus amongst the growers that “everything you grow is popular” and sells. Growers sell just about everything they take to the farmers market. Only one grower said they may not sell all the produce taken to the market on any given day. Another stated that he has far greater demand than supply for what he grows. One area identified by a grower where supply exceeds demand is for broccoli and cauliflower. Local produce items most often requested by customers included apples and strawberries.

In discussing expansion, none of the growers are looking to expand their operations. One said “I’m pretty tapped out right now.” Another farm owner said that he does not have the space to grow additional produce.

None of the growers were willing to share how much revenue was generated on a weekly or annual basis. They were also not willing to share product pricing information.
Two of the three growers stated the marketplace can support more growers because current growers cannot meet the demand. However, the other grower stated: “Every time someone new is added to the mix, it takes away from the other vendors.”

Comments and Advice

Two big keys are to be consistent with your product and your personnel.

The customers are not just buying the produce but the person who is selling the produce.

Constant loading and unloading produce is a challenge.

The most difficult thing about farmers markets is doing it for five and a half months straight, it wears you out and you are ready for the season to come to an end.

Another area of opportunity for new growers is supplying local restaurants. Alaska Root Cellars works with different farmers to supply approximately 20 restaurants and could be an outlet for ASC.
Potential Market Strategy

There are two main strategic issues that ASC must address early in the development process. The first is deciding whether to market directly to restaurants, institutions and the public or to sell its products to wholesalers. The second is to decide the types of products that will be grown. To some degree, determining where to sell its products will influence what types of products ASC chooses to grow.

Product Distribution

In order to meet its financial and social goals, ASC will need to be a high volume producer. The current business plan shows that if only lettuce were grown, a mid-range estimate for production would be more than a half million heads of lettuce annually. This is a significant volume and will require a carefully thought-out distribution strategy to maximize revenues. Building relationships with potential buyers will be a key activity.

Because of the potentially large volume of production and the need for ACS to maximize sales and income, they will likely have to work with some combination of markets. Following are some considerations for each market segments:

**Restaurants**

- High level of interest, especially in unusual products.
- Limited number of establishments.
- Limited potential sales volume that is significantly less than ASC production capability.
- Revenue per unit sold would be significantly higher (20 to 30 percent) than the same item sold to a wholesaler.
- Focusing on sales directly to restaurants would require a full-time sales and marketing position to call on customers and build relationships resulting in increased payroll and benefit costs.

**Wholesalers**

- High level of interest.
- Potential for high volume sales.
- Pricing will be the lowest of all potential markets.
- Easier to build a relationship with one distributor than with 40 restaurants, institutions, etc.

**Retailers**

- High level of interest.
- Potential for high volume sales.
- Price per unit sold would be better than the same item sold to a wholesaler, but not as high as direct sales to restaurants or to the public.
- Need sufficient volume to supply multiple stores.
Institutions

- Modest level of interest.
- Potential for high volume sales.
- Price per unit sold would be better than the same item sold to a wholesaler, but not as high as direct sales to restaurants or to the public.
- Most purchase through wholesalers.

Direct to the Public

- Highest price per item of all markets.
- Farmers markets require significant effort to organize and operate.
- Markets are seasonal (May to October).
- Provides additional training opportunities for ASC youth (such as cash handling and customer service).

Recommendations

The study team recommends working with one or more wholesalers with the goal of selling a substantial portion of production to this market to establish a stable income base. Working with these vendors will provide access to most of the large institutional and restaurant markets, and some of the retail markets, without the need for a significant one-on-one sales and marketing effort with multiple operations. A key component of this strategy will be building a working relationship with a wholesaler. If ASC decides to work through wholesalers, it is important to refrain from any attempts to sell directly to restaurants, institutions and others as this would be seen as competition with the wholesalers, and ASC would be immediately dropped as a client. ASC should pursue an agreement with Providence Hospital once its operation is running smoothly. An agreement for a guaranteed weekly purchase through a wholesaler would be significant for ACS while maintaining a positive relationship with the wholesaler.

ASC should participate in multiple farmers markets to increase revenues and provide additional training experiences for the program’s youth. Nearly all of the farms currently providing produce to wholesalers are also selling at the markets. Wholesalers have a more tolerant view of this type of direct sales and seem to expect producers to sell at markets. Based on comments from market organizers, it appears that ASC could generate significant revenue from the markets as well as gain important exposure for the program.

ASC should also pursue avenues to place their products in fresh produce “boxes.” Community Supported Agriculture programs (CSA’s) combine fresh produce from multiple producers, and subscribers receive weekly shipments of boxes. Washington-based Full Circle Farms is one of the largest CSA’s working in Alaska, there is also a CSA in Palmer, and a least one local CSA operating in Fairbanks.

After greenhouse operations are firmly established, ASC may wish to explore the possibility of running a farmers market or operating a CSA directly from their greenhouse.
Potential Demand

Demand for Fresh Produce in Anchorage

There is without doubt significant demand for fresh Alaska grown produce, and demand greatly exceeds current supply in nearly every category. The study team conducted interviews with restaurant chefs and managers, food buyers for large and medium sized grocery stores, wholesale distributors, farmer’s market participants, institutional operators, and others with knowledge of the produce industry in Alaska. Below are selected comments concerning the demand for fresh Alaskan produce:

*If there’s a local product, we buy it.*

*If more were available, we’d buy more.*

*We buy whatever local produce we are able to get; if more were available, we’d use more.*

*We would love to see more produce on the market. The demand is huge. We just need more produce to come anywhere close to meeting the demand. Maybe they (ASC) even want to look at a market on site. You know the market is huge. We talk about it regularly. We opened up new farmers markets and it still doesn’t meet the need. Spenard calls me, they want one over there. There just isn’t that much produce. There aren’t that many farmers. Year-round operation would be great for Anchorage.*

*If they (ASC) had a 12-month operation for lettuces or tomatoes, they’d be astounded at how much they can sell.*

*We buy 100 pounds of tomatoes every week and run out. I sell every tomato I can get.*

*We may not sell all the produce we take to the market on any given day.*

*Everything you grow is popular and sells.*

*We could sell more broccoli and cauliflower.*

Two of the three farmers who attend markets regularly stated that the marketplace can support more growers because current growers cannot meet the demand. However, one farmer expressed concern about new entrants in the market.

A core element in the ASC business strategy is to identify underserved and unserved markets, and to increase the overall availability of fresh produce in Alaska. ASC should concentrate on items where the market demand is greatest. Because ASC will be operating year-round, they will be able to provide fresh produce in the winter and spring months when there has traditionally been very little Alaska produce (except root crops) on the market. This off-season market is currently not being served by the local food production system.

An operation with the production capacity of ACS could in fact increase the overall demand for fresh local produce as consumers satisfied with the higher quality products increase their purchases. This could positively affect all growers in the Anchorage market.
Estimated Per Capita Produce Consumption

Interview Data

In addition to confirmation of significant demand for fresh produce, the study team quantified overall market demand potential for ASC products. Though the interviews did not provide sufficient data to develop comprehensive estimates of demand, the following information is useful in understanding market size in Anchorage for specific products. The volumes listed below can be affected by many variables, such as season, availability and price.

- A vendor reported selling 16,000 pounds of lettuce per week.
- Another reported selling 60 cases of romaine lettuce and four cases of leaf lettuce a week.
- The market for spring mix/baby greens is estimated at 2,000 to 3,000 pounds per week and potentially much higher.
- Demand for basil is at least 150 to 200 pounds per week.
- Overall demand for herbs could be 400-600 pounds per week.
- Demand for cilantro exceeds 150 cases per week (30 bunches per case).
- Demand for tomatoes exceeds 6,000 pounds per week and could easily be more than double this amount. Varieties include Roma, cherry and on-the-vine.
- Squash sales are at least 200 to 250 cases (25 pounds per case) per week.
- Cucumber demand likely exceeds 500 to 600 pounds per week.
- The ASD purchases approximately 2,700 pounds of produce per month.

In terms of the overall Anchorage area market, these estimates are conservative. Vendors expressed interest in working with ASC and would provide more detailed demand estimates once a working relationship is established.
USDA Per Capita Consumption Estimates

There is not a consistent, specific source of data on consumption of vegetables in the United States. However the USDA does not provide detailed data for produce “availability” per capita, meaning the average annual pounds grown per person. The agency has recently developed a model that attempts to take waste into account and provides a per capita figure that could be described as “an annual average pounds acquired per person.” Acquisition could be from purchases, trade, barter or self-grown vegetables. The table below shows estimated per capita pounds acquired in the US for selected produce based on the USDA model.

### Estimated Per Capita Acquisition, US 2007 (in pounds per year)

<table>
<thead>
<tr>
<th>Pounds per year, per consumer</th>
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<tbody>
<tr>
<td>All fresh vegetables</td>
<td>168.5</td>
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<tr>
<td>Tomatoes</td>
<td>15.0</td>
</tr>
<tr>
<td>Head lettuce</td>
<td>17.2</td>
</tr>
<tr>
<td>Romaine and Leaf lettuce</td>
<td>12.1</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>5.5</td>
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<tr>
<td>Squash</td>
<td>3.5</td>
</tr>
<tr>
<td>Spinach</td>
<td>1.5</td>
</tr>
<tr>
<td>Kale</td>
<td>0.2</td>
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Notes: This table uses aggregate food availability data, adjusted for losses. The basic availability estimate is made at a primary distribution level, which is dictated for each commodity by the structure of the marketing system and data availability. The loss factors presented here are first estimates and are intended to serve as a starting point for additional research and discussion.

Product Mix

Based on the results of the market demand interviews and discussions with CropKing, the following products appear to have the greatest potential, generally ranked by demand, ease of production and potential profitability. Further, this analysis suggests that ASC begin operations with lettuces, tomatoes and basil and once the operation is running smoothly, ASC might consider diversifying into additional items. Demand is great enough for all of these products that ACS production should easily absorbed by the market. According to CropKing lettuces generate the highest revenue per bay.

- Baby greens mix
- Leaf and romaine lettuces
- Tomatoes
- Herbs, mostly basil, but possibly cilantro, mint, and spearmint
- Cucumbers
- Red and yellow bell peppers
**Product Quality, Consistency and Shelf Life**

The use of hydroponic growing techniques will allow ASC to grow a very consistently high-quality produce. Tomatoes and lettuce will be very uniform in size and appearance, and free of dirt. The lettuces will be packaged with the root system still intact in crisper containers, which facilitates a longer shelf life. Inconsistent quality, dirt and shelf life were three of the interviewee’s main concerns. ASC’s ability to negate these issues will help to increase market acceptance of its product.
Production and Market Share Estimates

The study team acquired estimated annual crop production data for tomatoes and lettuce from CropKing (only data for these two products was available).

The ASC greenhouse is planned as an eight bay operation so the maximum production for any one item is based on the estimated annual production capacity for eight bays. For example, if tomatoes were produced in all eight bays, estimated maximum annual production would be about 144,000 pounds. This would be equivalent to about 8.1 percent of the estimated annual tomato acquisition of Anchorage residents.

Even at maximum production of any one item, the ASC facility would produce less than 10 percent of the market share of tomatoes and less than 16 percent for lettuce in Anchorage. ASC will likely produce multiple items so actual market share for any one item would be substantially lower. The tables below show estimated market share for tomatoes and lettuce.

The tables below show the estimated potential market share for selected produce items in Anchorage. Per capita acquisition estimates were derived from USDA data and average production per greenhouse bay data was supplied by CropKing, a supplier of greenhouses and hydroponic growing equipment. According to the Alaska Department of Labor, the estimated population of Anchorage in 2008 was 285,000.

There are at least two factors that could affect estimated market demand.

- Working through wholesalers, ASC will have access to a greater percentage of the state’s population than just Anchorage (military bases, etc.). This could offer even greater potential demand than those developed in the market share estimates section of this report.

- A case could be made that per capita acquisition of certain products is lower in Alaska because of quality, availability and price. Even if tomato acquisition were half of the US per capita (7.5 pounds vs. 15 pounds) or ASC production were doubled it would still represent less than 20 percent of the total Anchorage market.

### ASC Potential Market Share for Tomatoes

<table>
<thead>
<tr>
<th>Estimated Annual Average Production* per Bay (in lbs)</th>
<th># of Bays</th>
<th>Annual Production* (in lbs)</th>
<th>Market Size** (in lbs)</th>
<th>% of Anchorage Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>18,000</td>
<td>2</td>
<td>36,000</td>
<td>1,781,000</td>
<td>2.0%</td>
</tr>
<tr>
<td>18,000</td>
<td>4</td>
<td>72,000</td>
<td>1,781,000</td>
<td>4.0</td>
</tr>
<tr>
<td>18,000</td>
<td>6</td>
<td>108,000</td>
<td>1,781,000</td>
<td>6.1</td>
</tr>
<tr>
<td>18,000</td>
<td>8</td>
<td>144,000</td>
<td>1,781,000</td>
<td>8.1</td>
</tr>
</tbody>
</table>

*Annual production is estimated to be seasonal from May through September. **Seasonal market size is based on a percentage of the annual US per capita acquisition of 15 lbs.

---

1. The tomato harvest and acquisition will be seasonal. The number of months that ASC can expect to harvest tomatoes is unclear. In other US locations harvest takes place for eight to nine months. CropKing could not estimate how long the season would be in Anchorage. A conservative 5-month harvest season was used to calculate annual production and market size.


3. USDA http://www.ers.usda.gov/Data/FoodConsumption/FoodGuideIndex.htm#veg
If lettuce were produced in all eight bays, estimated maximum annual production would be about 447,000 heads. This would be equivalent to 15.7 percent of the estimated total annual lettuce acquisition of Anchorage residents.

### ASC Potential Market Share for Lettuce

<table>
<thead>
<tr>
<th>Estimated Annual Average Production* per Bay (in heads)</th>
<th># of Bays</th>
<th>Annual Production* (in heads)</th>
<th>Market Size** (in heads)</th>
<th>% of Anchorage Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>55,872</td>
<td>2</td>
<td>111,744</td>
<td>2,850,000</td>
<td>3.9%</td>
</tr>
<tr>
<td>55,872</td>
<td>4</td>
<td>223,488</td>
<td>2,850,000</td>
<td>7.8</td>
</tr>
<tr>
<td>55,872</td>
<td>6</td>
<td>335,232</td>
<td>2,850,000</td>
<td>11.8</td>
</tr>
<tr>
<td>55,872</td>
<td>8</td>
<td>446,976</td>
<td>2,850,000</td>
<td>15.7</td>
</tr>
</tbody>
</table>

*Annual production is based on 12 crop rotations. **Market size is based on annual US per capita acquisition of 12.1 pounds converted to the equivalent number of heads (one head of leaf lettuce weighs about .8 pounds) which results in per capita acquisition of about 10 heads of lettuce per year.
Estimated Revenue Potential

A revenue model accompanying this report was developed to determine optimum greenhouse space allocation for lettuce, baby greens, tomatoes and basil in order to maximize revenue. The model was based on estimated wholesale and farmer’s market sales ratios, and estimated Anchorage wholesale prices.

Estimated Average Prices

The project team first developed estimates for average Anchorage wholesale and farmer’s market prices for the four recommended produce items through follow-up interviews with wholesale vendors, farmer’s market participants and review of USDA Agricultural Marketing Service (AMS) wholesale price data for April through October 2009. Wholesale vendors were asked to provide an average price for each of the four products FOB Anchorage. The AMS was used to indentify seasonal trends and roughly verify wholesaler estimates.

Produce prices fluctuate throughout the year depending on supply and demand. In general, prices for all of the products are lower in June, July and August when there are greater quantities of product on the market.

Freight is a significant factor in the wholesale price FOB Anchorage. For example, the price of a 24 count case of lettuce in California typically ranges from $5 to $15. (Bad weather or other supply related problems can increase prices significantly.) Freight costs to move a chilled pallet of 35 cases of lettuce by truck from California to Anchorage can range from $350 to $500 or $10 to $14 per case. During peak summer production months the cost of freight can be double the cost of the lettuce.

Wholesale Prices

LETTUCE

The FOB Anchorage cost to the wholesaler reportedly ranges from $15 to $29 per case. Based on interviews we estimate an average price range for lettuces (romaine and leaf lettuce are roughly the same) FOB Anchorage to be between $19 and $25. ASC will need to deliver its product to the wholesaler’s location for prices in the high teens to low $20 range. In Phase 1 restaurant interviews, those who mentioned lettuce prices stated they generally paid in the low-to-mid $20’s for a case of lettuce, confirming this range.

BASIL

Basil prices are somewhat variable by season and much of the basil delivered to Anchorage is sent via air freight because of perishability. Basil is typically sold in either a package of three one-ounce plastic containers or in one pound bags. One pound bags can be loose or bunched, with bunched products receiving a premium price. According to one wholesaler, the cost to air freight chill products from California to Anchorage can be as high as $2.00 to $3.50 per pound when packaging and handling charges are included. Wholesalers reported FOB Anchorage prices ranging from $5.25 to $7.25 per pound for basil.

BabY GreenS

Baby greens generally come in three pound “pillow” packs. FOB Anchorage prices for baby green typically range from $2.70 to $4.00 per pound with prices occasionally dropping as low a $2.35. Baby greens deteriorate quickly and consumers are not satisfied with a slimy product. It takes a minimum of three days to get products from California to Anchorage by truck and airfreight adds significantly to the cost per pound. It seems likely that wholesalers would pay somewhat of a premium for very fresh baby greens.

Tomatoes

Tomatoes are very cheap during the summer season, selling for $5 to $6 per 15 pound box in California. When freight is included, a box of California tomatoes would range from $10 to $12 FOB Anchorage. The USDA listed 15 pound cases of British Columbia hot house tomatoes at a steady price of $15 FOB Seattle for nearly all of the 2009 season. This could be related to a significant volume sold at contract prices. Tomato prices also vary for sized versus unsized cases. A reasonable range for tomatoes seems to be $12 to $15 per case, FOB Anchorage.

### Anchorage Wholesale Market Estimated Average Prices

<table>
<thead>
<tr>
<th>Type</th>
<th>Low</th>
<th>Med</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lettuce per head</td>
<td>$0.80</td>
<td>$0.92</td>
<td>$1.05</td>
</tr>
<tr>
<td>Baby greens per pound</td>
<td>3.00</td>
<td>3.50</td>
<td>4.00</td>
</tr>
<tr>
<td>Basil per pound</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Tomatoes per pound</td>
<td>0.80</td>
<td>0.90</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Farmer’s Market Prices

Farmer’s market participants were asked for averages prices at the markets they were most familiar with. Prices for the four items were fairly consistent.

- Typical tomatoes prices were in the range of $2.50 to $3.50 per pound. Several interviewees mentioned that prices had reached the $4, $5 and $6 level from some vendors in 2009.

- Basil is typically sold in one ounce packages or one pound bags. Prices were reported to be $2 per single ounce and $1 per ounce per when purchasing a pound ($16 per pound).

- Various types of lettuces sell for $2.00 to $3.00 per head.

- Baby spring mix is sold by the bag and ranges from about $5.50 to $6.50 per pound depending on location and quantity purchased.

### Alaska Farmers Market Estimated Prices

<table>
<thead>
<tr>
<th>Type</th>
<th>Low</th>
<th>Mid</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomatoes per pound</td>
<td>$2.50</td>
<td>$3.00</td>
<td>$3.50</td>
</tr>
<tr>
<td>Basil per pound</td>
<td>-</td>
<td>16.00</td>
<td>-</td>
</tr>
<tr>
<td>Basil 1oz packages</td>
<td>-</td>
<td>2.00</td>
<td>-</td>
</tr>
<tr>
<td>Lettuce per head</td>
<td>2.00</td>
<td>2.50</td>
<td>3.00</td>
</tr>
<tr>
<td>Baby spring mix per pound</td>
<td>5.50</td>
<td>6.00</td>
<td>6.50</td>
</tr>
</tbody>
</table>
Production Yields

Crop yield estimates were developed based on multiple interviews conducted with CropKing representatives, a UAF horticulturalist and through a review of green house production economics literature. A significant portion of these estimates are based on CropKing statements which this study does not attempt to independently verify. However, CropKing is a well established business and it is assumed the information provided was reasonably accurate.

Most of CropKings yield estimates are based on greenhouse locations in the continental US. The study team reviewed data concerning available daylight in Anchorage versus Cleveland Ohio (the closest location to CropKing) and had extensive discussions with CropKing concerning how Anchorage’s daylight patterns could affect yields. Total available daylight is one of the most significant factors in annual yields.

The following table shows the estimated number of crop rotations ACS could expect per year based on the best available information.

<table>
<thead>
<tr>
<th>Estimated Crop Rotation and Yield per Bay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual</td>
</tr>
<tr>
<td>Rotations</td>
</tr>
<tr>
<td>Tomatoes</td>
</tr>
<tr>
<td>Basil</td>
</tr>
<tr>
<td>Lettuce</td>
</tr>
<tr>
<td>Baby greens</td>
</tr>
</tbody>
</table>

*Adjusted for a lettuce and baby greens pack out rate of 95 percent.

Yields

- Tomatoes production is estimated to be in the range of 25 to 35 pounds per plant, per year (in Anchorage there will likely be only one crop per year). The revenue projections in this study are based on 30 pounds per plant, per year.

- One of CropKings representatives is a former basil grower who provided good information. He stated that basil is somewhat finicky to grow. The plants do not like excessive heat or a damp chill. Leaves can be harvested from the plants two to four times before the plant is removed and a new plant is started. This process may be repeated four to five times a year. He estimated a range of 800 to 1,200 pounds of basil per bay, per month. He stated that experience is critical and that only top growers could expect to be in the high range. The revenue projections in this study are based on a median weight of 1,000 pounds per bay, per month for a five month season.

- Lettuce crop rotations were estimated to range from 11 to 13 per year. The revenue projections in this study are based on 12 rotations per year.

- Baby greens were the most difficult crop to estimate yields. The mixes can be made up from 20 to 30 different types of lettuces and other greens. Baby romaine is very light, while radicchio and endive are significantly heavier by volume, which can affect final product weight. The revenue projections in this study are based on 14 rotations per year and harvest of three ounces per plant net (minus the roots).
Potential Revenue Scenarios

The model accompanying this report includes worksheets for each of the four items and a summary worksheet. Tables of the summary data are presented below. High, mid and low variables for price and production were estimated for each item to generate estimated revenues per bay, per item. Wholesale versus farmers market sales were estimated as percentages of total production. For example, 5 percent of lettuce production is estimated to sell at farmer’s markets. That is the equivalent of about 2,700 heads per bay (annually). If all eight bays produce lettuce, that would equate to more than 21,000 heads sold at farmer’s markets annually. ASC will require sufficient manpower to attend multiple markets for 10 to 15 weeks a year in order to achieve this level of sales.

Potential Sales Scenarios

<table>
<thead>
<tr>
<th>Wholesale/Farmer’s Market Ratio</th>
<th>Revenue Per Bay/Year*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Lettuce 95/5</td>
<td>$42,000</td>
</tr>
<tr>
<td>Basil 80/20</td>
<td>34,000</td>
</tr>
<tr>
<td>Baby Greens 90/10</td>
<td>33,000</td>
</tr>
<tr>
<td>Tomatoes 80/20</td>
<td>20,000</td>
</tr>
</tbody>
</table>

*Adjusted for a lettuce and baby greens pack out rate of 95 percent.

If all eight bays were dedicated to one item, lettuce would by far produce the highest estimated annual revenue ($424,000) with basil the next highest revenue generator at $357,000 annually in the mid-case.

All Bays Dedicated*

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Mid</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lettuce</td>
<td>$335,000</td>
<td>$424,000</td>
<td>$528,000</td>
</tr>
<tr>
<td>Basil</td>
<td>275,000</td>
<td>357,000</td>
<td>439,000</td>
</tr>
<tr>
<td>Baby Greens</td>
<td>260,000</td>
<td>307,000</td>
<td>353,000</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>158,000</td>
<td>182,000</td>
<td>207,000</td>
</tr>
</tbody>
</table>

*Based on the sales ratios in the previous table. Adjusted for a lettuce and baby greens pack out rate of 95 percent.
The estimates below highlight the importance of lettuce in maximizing potential revenue. The two mid scenarios based on six bays of lettuce produce significantly higher revenues than the mid-range options with less lettuce. The combination of six bays of lettuce and two bays of basil produce the highest estimated mid-range revenue at $407,000. The second highest revenue generator is six bays of lettuce and two bays of baby greens at an estimated $$395,000.

It will likely take at least one to two years for ASC to realize full production levels and maximum revenues. Cash flow budgets should plan for first year revenues in the 50 to 60 percent of maximum revenue range and 75 to 90 percent for the second year assuming suitably skilled professionals are retained to manage the growing operations.

### Potential Revenue for Various Product Mixes

<table>
<thead>
<tr>
<th>Range</th>
<th>Lettuce Bays</th>
<th>Lettuce Revenue</th>
<th>Baby Greens Bays</th>
<th>Baby Greens Revenue</th>
<th>Basil Bays</th>
<th>Basil Revenue</th>
<th>Tomatoes Bays</th>
<th>Tomatoes Revenue</th>
<th>Total Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>6</td>
<td>$251,000</td>
<td>2</td>
<td>$65,000</td>
<td>0</td>
<td>$0</td>
<td>0</td>
<td>$0</td>
<td>$316,000</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>167,000</td>
<td>1</td>
<td>33,000</td>
<td>1</td>
<td>34,000</td>
<td>2</td>
<td>39,000</td>
<td>274,000</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>84,000</td>
<td>2</td>
<td>65,000</td>
<td>2</td>
<td>69,000</td>
<td>2</td>
<td>39,000</td>
<td>257,000</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>42,000</td>
<td>4</td>
<td>130,000</td>
<td>1</td>
<td>34,000</td>
<td>2</td>
<td>39,000</td>
<td>246,000</td>
</tr>
<tr>
<td>Mid</td>
<td>6</td>
<td>$318,000</td>
<td>2</td>
<td>$77,000</td>
<td>0</td>
<td>$0</td>
<td>0</td>
<td>$0</td>
<td>$395,000</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>212,000</td>
<td>1</td>
<td>38,000</td>
<td>1</td>
<td>45,000</td>
<td>2</td>
<td>46,000</td>
<td>341,000</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>106,000</td>
<td>2</td>
<td>77,000</td>
<td>2</td>
<td>89,000</td>
<td>2</td>
<td>46,000</td>
<td>317,000</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>53,000</td>
<td>4</td>
<td>153,000</td>
<td>1</td>
<td>45,000</td>
<td>2</td>
<td>46,000</td>
<td>296,000</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>318,000</td>
<td>2</td>
<td>89,000</td>
<td>2</td>
<td>89,000</td>
<td></td>
<td></td>
<td>407,000</td>
</tr>
<tr>
<td>High</td>
<td>6</td>
<td>$396,000</td>
<td>2</td>
<td>$88,000</td>
<td>0</td>
<td>$0</td>
<td>0</td>
<td>$0</td>
<td>$484,000</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>264,000</td>
<td>1</td>
<td>44,000</td>
<td>1</td>
<td>55,000</td>
<td>2</td>
<td>52,000</td>
<td>415,000</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>132,000</td>
<td>2</td>
<td>88,000</td>
<td>2</td>
<td>110,000</td>
<td>2</td>
<td>52,000</td>
<td>382,000</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>66,000</td>
<td>4</td>
<td>176,000</td>
<td>1</td>
<td>55,000</td>
<td>2</td>
<td>52,000</td>
<td>349,000</td>
</tr>
</tbody>
</table>
**Related Issues**

The ACS team needs to make many significant decisions concerning greenhouse operations that will have far-reaching consequences on future production and revenues. We highly recommend that ASC enlist the services of a horticulturalist with experience in northern climate greenhouse operations as soon as possible. Also recommended is a visit to the greenhouses at Pike’s Restaurant and Chena Hot Springs. It is likely there are valuable (and money saving) lessons to be learned from these seasoned operations.

ASC greenhouse space allocation decisions need to be made soon in order to estimate equipment and installation costs. The bay setups and equipment are different for vine crops and leaf crops and different for lettuce and baby greens. It is clear, based on estimated production yields and revenue that ASC will need to devote a substantial portion of greenhouse space to the production of leaf crops, especially lettuce, if it wishes to maximize revenue. While there is significant demand for tomatoes, the revenue per bay generated by this crop is significantly lower than lettuce at less than half the estimated revenue per bay ($53,000 versus $23,000). Depending on the cash flow needs of the overall operation it may still be reasonable to dedicate one or two bays to tomato production. There is likely some marketing advantage in having multiple crops for sale. Tomatoes are the premier local crop and having a product mix could facilitate greater interest at farmer’s markets and perhaps even from wholesalers.

Lettuce production and sales price will be the key factor in maximizing revenue. Unfortunately, lettuce has the greatest price sensitivity of the four products, and even $0.05 or $0.10 per head could make a significant difference in sales volume and overall revenue. Lettuce is easily grown and readily available for reasonable prices (barring weather issues) throughout the year. ASC will need to sell significant quantities of lettuce (more than 300,000 heads) on the wholesale market to achieve revenues sufficient to cover the costs of operation.

The accompanying model is based on the following range of sale prices per head: $0.80, $0.92 and $1.05. This assumes lettuce will be sold in standard bulk cases of 24 heads. The study team was unable to determine with any certainty the perceived value of crisper packaging. According to CropKing’s business planning model, crisper packaging costs about $0.15 per head or about $3.60 per case of 24.

If production costs can be kept low, perhaps there is room to accommodate the cost of the crisper packaging and ASC can still sell cases of lettuce in the low $20 range. However, the primary purpose of the crisper is to prolong shelf life and this is not likely a factor for most commercial buyers in Anchorage. Most end users require multiple deliveries per week indicating that shelf life is not an issue. There may be some potential for lettuce that is destined for bush communities where extra protection and increased shelf life may be perceived as desirable. Individual crisper packaging for use with products sold at farmer’s markets may be appropriate and there is likely enough pricing flexibility to absorb the cost. ASC may wish to establish demand first and introduce crisper packaging as an option in the wholesale market after operations are established.
Appendix A

List of Contacts

Institutions

Anchorage School District, Karen Richardson – Food Services Manager; Carolyn Anderson – Purchasing Agent; Debbie Green – Purchasing
Alaska Department of Corrections, Michael Kim, Procurement Specialist
Hiland Mountain Correctional Facility, Mustapha Abdallah, Food Supervisor
Providence Hospital, Forney Ingram, Director Dietary Services, Al Parish – CEO

Food Retailers

Costco, Keith Neal, Produce Buyer
Fred Meyer, Bob Barnett, Produce Manager
Natural Pantry, Rick Solbergh, Owner
New Sagaya Marketplace, John Caulfield, Produce Manager
Wal-Mart, Mike Crane, Grocery Manager

Wholesale Distributors

Alaska Commercial Company, Rene Perez, Produce Category Manager
Sysco Food Services, Jeff Hogan
Alaska Root Cellars, Dave Thorn
Dito’s Fresh Cut-Processing Plant, Wesley McCool, Operations Manager
Ditomaso’s Fruit and Vegetables, Rick Thomas, Owner
Charlie’s Produce, Brian Weems, Buyer

Restaurant Chefs/Owners

Simons and Seaforts, Bridget Tatalas, General Manager
Sullivan Steakhouse, Taylor Perry
Glacier Brewhouse, Eric Dubay, Mike Jones, Chef
ORSO, Rob Kineen, Chef
Southside Bistro, Travis
Jens’ Restaurant, Nancy, Chef
Flying Machine, Bill Wallace
Kinkaid Grill, Al Levinson, Proprietor
The Marx Brothers Café, Van and Damon, Owners
Middle Way Café, Jacob
Sacks Café
Snow City Café, Natalie Janica and Cindy, Kitchen Manager
Sea Galley
Spenard Roadhouse, Shane Moore

5 Charlie’s Produce bough Alaska Carrot Company
Farmers Market Organizers

Eagle River Farmers Market, Lynn Mattison
Palmer Friday Flings, Stacey Sigar
South Anchorage Farmers Market, Arthur Keyes
Wasilla Farmers Market, LeRoi Heaven
Anchorage Downtown Market and Festival, Bill Webb
Northway Mall Market, Bill Webb
University Center Market, Bill Webb
Central Kenai Peninsula Farmers Market, Clayton Hillhouse

Farmers Market Participants

Glacier Valley Farm, Arthur Keyes
Dinkel’s Veggies, Leslie
A.D. Farms, Alex Davis

Other

Alaska Grown, Jeff Werner
Appendix B

Additional Resources

During the course of conducting the interviews for the Seeds of Change project, additional resources were identified that could help the project as it progresses.

- Catholic Social Services has been working with the USDA in providing training to refugees to assist them as they develop farms. Contact: Karen Ferguson, Refugee Assistance Program at 907.222.7376 or Terra Dupper at 907. 222.7341
- Sue McCollum, Effie Kokrine Charter School, Fairbanks has been working with University of Alaska, Fairbanks and Future Farmers to ensure students success in the classroom and in the greenhouse.
- Marilyn Brentlinger, CropKing at 800.321.5656
- UAF Agriculture and Forestry Experiment Station. 907.474.7188
- University of Alaska, Fairbanks – Cooperative Extension Service, Julie Riley, 907.786.6300
- University of Alaska, Fairbanks – Horticulture Department, Jeff Werner, 907.474.6932

While conducting background research at Alaska Grown the study team spoke with Jeff Werner. Following is a summary of that interview. Jeff wears many different hats; for Alaska Grown, he manages the website. Jeff is with the University of Alaska Fairbanks Horticulture Department as well as serving as the Production Manager and providing project oversight for two hydroponic greenhouses in the Fairbanks area – Chena Hot Springs Resort and Pike’s Resort. He also works with Future Farmers of America. In his capacity as a university employee, Jeff works with greenhouse growers to help find solutions.

Chena Hot Springs has a year-round greenhouse that grows lettuce and tomatoes (about 500 pounds a week in the summer). Pike’s is a seasonal greenhouse that grows tomatoes (5,000 pounds annually) and cucumbers. The produce is used in the restaurant, sold to customers, and donated to the local Food Bank. Pike’s greenhouse is operated and maintained by special needs students – students who might not be able to work in a “traditional” environment. Jeff recommends that Seeds of Change visit both Chena and Pike’s to see what they are doing.

Jeff also works in cooperation with Sue McCollum, Effie Kokrine Charter School (907.474.0958) on developing curriculum and programs on how to best meet student needs. A challenge in teaching agricultural science to students who don’t do well in math and English is that greenhouse can become an escape for them and studies can be neglected. The challenge becomes how to make them successful in the greenhouse and in the classroom. He has worked with students who are challenged in Fairbanks and Palmer.

Regarding markets, Jeff mentioned that Kodiak and Southeast Alaska do not see Alaska Grown products and there is a market there. Full Circle Farms, based in Washington State, which distributes weekly produce boxes, is looking for Alaskan produce suppliers.

Jeff stated that there is a demand for fresh produce that is not being met. The demand is for produce and products that are affordable to the average Alaskan. He recommends three or four produce items that a greenhouse should grow: tomatoes, cucumbers, herbs (basil, cilantro, spearmint and peppermint), and parsley. He mentioned that spearmint in not being grown in Alaska today.
The greatest barrier for entry into the market for a new grower is quality control, making sure there is consistency with your product, and getting it to the market.
Appendix C

Institutional Facility Prices

Department of Corrections

Established Contract Prices

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broccoli</td>
<td>$19.50</td>
<td>20 lbs.</td>
</tr>
<tr>
<td>Green Cabbage</td>
<td>22.00</td>
<td>55 lbs.</td>
</tr>
<tr>
<td>Collard Greens</td>
<td>13.00</td>
<td>5 lbs.</td>
</tr>
<tr>
<td>Lettuce</td>
<td>22.50</td>
<td>24 heads</td>
</tr>
<tr>
<td>Leaf Lettuce</td>
<td>18.50</td>
<td>24 heads</td>
</tr>
<tr>
<td>Romaine Lettuce</td>
<td>18.50</td>
<td>24 heads</td>
</tr>
</tbody>
</table>

Source: Department of Corrections.

Anchorage School District

The following list was the request for the mid-October for one week of the Districts produce needs:

Anchorage School District October Produce Bid Items

<table>
<thead>
<tr>
<th>Item</th>
<th># of cases</th>
<th>#’s per case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salad mix¹</td>
<td>98</td>
<td>20 lbs.</td>
</tr>
<tr>
<td>Bananas</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Cauliflower</td>
<td>54</td>
<td>6 lbs.</td>
</tr>
<tr>
<td>Baby peeled carrots²</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Broccoli</td>
<td>33</td>
<td>12 lbs.</td>
</tr>
<tr>
<td>Carrot sticks</td>
<td>22</td>
<td>20 lbs</td>
</tr>
<tr>
<td>Oranges (113 ct)</td>
<td>14</td>
<td>30 lbs.</td>
</tr>
<tr>
<td>Apples</td>
<td>10</td>
<td>125 ct</td>
</tr>
<tr>
<td>Red apples</td>
<td>10</td>
<td>88 ct</td>
</tr>
<tr>
<td>Cherry tomatoes</td>
<td>9</td>
<td>10 lbs.</td>
</tr>
<tr>
<td>Cucumber</td>
<td>9</td>
<td>25 lbs.</td>
</tr>
<tr>
<td>Red peppers</td>
<td>8</td>
<td>5 lbs.</td>
</tr>
<tr>
<td>Yellow peppers</td>
<td>8</td>
<td>5 lbs.</td>
</tr>
<tr>
<td>Celery sticks</td>
<td>6</td>
<td>20 lbs.</td>
</tr>
<tr>
<td>Grapes</td>
<td>6</td>
<td>18 lbs.</td>
</tr>
<tr>
<td>Oranges (88 ct)</td>
<td>6</td>
<td>30 lbs.</td>
</tr>
<tr>
<td>Shredded lettuce</td>
<td>5</td>
<td>20 lbs.</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>5</td>
<td>25 lbs.</td>
</tr>
</tbody>
</table>

November – March salads come off the menu due to freezing issues. Vanderweele will start to supply carrots in November.
Interview Questions

Restaurants

INTRODUCTION: We are conducting a demand study for a potential greenhouse operation in Anchorage that would provide fresh produce for the Anchorage market. Can I ask you a few questions?

The greenhouse project is considering growing different types of lettuce, bell peppers, sweet basil, and other produce year-round. We would like to better understand potential demand for local produce.

Do you currently use any locally grown Alaska produce? (If so list what they use). About how much ________ do you use a week? About how much do you pay for____________________ (get price/qty if possible).

Does that price fluctuate significantly from season to season?

Is locally grown produce perceived as higher-quality by your customers?

What are the top three or four fresh produce items you would most like to have grown locally?

Is price a major factor, minor factor or not a factor when you consider purchasing fresh local produce?

If the price for locally grown produce was about the same as produce from elsewhere, would you buy locally?

Would you pay 5 percent more for fresh, locally grown produce?

Would you pay 10 percent more for fresh, locally grown produce?

Would you pay 20 percent more for fresh, locally grown produce?

Can you estimate about how much of the following fresh, local produce you might purchase per week?

Let us, bell peppers, basil

We are conducting this study for a project called Seeds of Change. The project will help at risk Anchorage youth learn appropriate work skills and behavior through growing and marketing fresh produce. Youth, age 16-22, will be supervised and provided safe housing while they learn important job skills by operating a year-round greenhouse and producing large volumes of fresh produce in Anchorage. Seeds of Change is sponsored by the Anchorage Urban League and supported by the Municipality of Anchorage, and the University of Alaska Anchorage.

If prices for locally grown produce were slightly higher than other purveyors, would you be more likely to purchase local produce from the Seeds of Change Project knowing that the program would help at risk Anchorage youth or would this make no difference in your purchase decisions?

How many times per week do you typically buy produce?

Is year-round availability of an item very important, somewhat important or not important to you? (probe if important) which products etc.

What advice would you give Seeds of Change if it wants to sell produce to local restaurants?

Do you have any other questions or comments about locally grown produce?
Retailers/Wholesalers

INTRODUCTION: We are conducting a demand study for a potential greenhouse operation in Anchorage that would provide fresh produce for the Anchorage market. Can I ask you a few questions? The greenhouse project is considering growing different types of lettuce, bell peppers, sweet basil, and other produce year-round. We would like to better understand potential demand for local produce.

Do you currently sell any locally grown Alaska produce? (If so, list what they sell).

About how much _________ do you sell per week? About how much do you pay for _____________ (get price/qty)

Does the price you pay fluctuate significantly from season to season?

Is locally grown produce perceived as higher-quality?

What are the top three or four fresh produce items you would most like to have grown locally?

Is price a major factor, minor factor or not a factor when you consider purchasing fresh local produce?

Would you pay 5 percent more for fresh, locally grown produce?

Would you pay 10 percent more for fresh, locally grown produce?

Would you pay 20 percent more for fresh, locally grown produce?

If you were to carry locally grown______________ in your stores/s about how much would you estimate you might need per week?

Lettuce, bell peppers, basil,

Is year-round availability of an item very important, somewhat important or not important to you?

How many times per week do you typically buy produce?

We are conducting this study for a project called Seeds of Change. The project will help at risk Anchorage youth learn appropriate work skills and behavior through growing and marketing fresh produce. Youth, age 16-22, will be supervised and provided safe housing while they learn important job skills by operating a year-round greenhouse and producing large volumes of fresh produce in Anchorage. Seeds of Change is sponsored by the Anchorage Urban League and supported by the Municipality of Anchorage, and the University of Alaska Anchorage.

If prices for locally grown produce were slightly higher than other purveyors, would you be more likely to purchase local produce from the Seeds of Change Project knowing that the program would help at risk Anchorage youth or would this make no difference in your purchase decisions?

What do you feel are the greatest barriers of entry into the market for local produce growers?

Is year-round availability of an item very important, somewhat important or not important to you? (probe if important) which products etc.

What advice would you give Seeds of Change if it wants to sell produce to local retailers?

Do you have any other questions or comments about locally grown produce?