

common market



Overcoming Obstacles to Local Frozen Produce

“Matching production mode to market niche”

Table of contents

Overview: Recognizing the Need	3
Introduction: About Common Market	4
Exploratory Process	
Demand Analysis: Institutional Procurement	6
Production and Processing: Fact Finding Trips	7
Test-Driving Frozen	10
Models of Frozen	
“Field Scale” Processing	12
Self-Operated IQF Processing	12
Co-Packing	13
Purchase Local Source-Identified Product from Regional Processor	14
Finding a Model-Market Match	15
The Opportunity	
Seabrook Farms	16
Product Sampling	17
Dusty Lane Farm	18
Volume and Costs	19
Progress and Potential	
Commitments and Successes	20
Challenges and Opportunities	21
Current and Future Impact	24
Conclusions	25

CREDITS

Credits: This article was authored by Molly Riordan. Original research conducted by Lindsay Gilmour. Additional support from Tatiana Garcia-Granados and Haile Johnston
Report Layout: Catherine Gonzalez



Overview: Recognizing the Need

Common Market, a distributor of local farm food in Philadelphia, PA, launched its line of local, source-identified frozen produce in October 2013. The shipment of its first cases of frozen spinach was the culmination of several years of research, site visits, interviews, and product testing all aimed at answering “the local frozen question.”

Freezing produce from small and medium size farms has several benefits for both farmers and customers. On the farm side, it is a form of season extension whereby growers can produce more in-season and continue to sell frozen product throughout the year. Frozen local produce also satisfies demand for more local farm product year-round. It is particularly well-suited for market sectors that rely on frozen produce for food preparation. Institutions, which serve a large segment of the population, are one such sector that can use local frozen produce to increase local food access and consumption.

Over its six year history serving institutional food service customers, which make up over 40% of its total sales, Common Market learned these kitchens rely heavily on frozen and fresh-cut produce. It saw an opportunity to increase year-round institutional access to local, sustainably-grown, high-quality produce by offering it to its constituents in forms they were prepared to utilize.

With support from the W.K. Kellogg Foundation-funded Technical Assistance Project for Value Chain Grantees facilitated by the Wallace Center, Common Market conducted an extensive exploratory process to uncover the depth of these needs and its potential to meet them. This case study traces Common Market’s exploratory process, product trials, and relationship building that ultimately led to its first branded, source-identified local frozen product. It also details the success, challenges, and vision for the potential of local frozen produce to significantly contribute to Common Market’s mission and values, and those of like-minded individuals and organizations.



INTRODUCTION: ABOUT COMMON MARKET

Common Market's Function & Mission

Common Market is a values-based distributor that connects institutions and retailers to sustainably grown food from local family farms. Its mission is to strengthen regional farms while making the local bounty accessible to communities and the institutions that serve them, including to populations that lack access to fresh food.

Common Market is based in a 70,000 square foot warehouse in North Philadelphia where it aggregates sustainably-raised food from 75 local farms. The food is repacked to fill orders for 200+ customers in Pennsylvania, New Jersey, Delaware and Maryland. The facility contains 100,000 cubic feet of cold storage space and four refrigerated box trucks. Housed within the facility is a refrigerated shipping container unit which serves as freezer storage.

Common Market's largest customer segment is institutional food service: hospitals, schools, universities, and eldercare facilities. Institutional food service is at the heart of its mission to provide healthy local food to people who traditionally lack access to it: children, the elderly, people with compromised immunities, and low-resource communities. It attempts to price all of its products at prices that meet both farmer and customer needs. It does not require its customers to sign purchase

agreements nor does it offer rebates or volume discounts—mechanisms common among many distributors serving institutions. In addition to institutional wholesale, Common Market distributes food to retailers, restaurants, and through Delaware Valley Farm Share, a workplace wellness-oriented farm box membership program.

Common Market is a non-profit 501(c)(3) based on a model of social entrepreneurship, using its earned income to address social, environmental, and equity needs. In 2013, Common Market's fifth year in business, 75% of its operational costs were covered through its earned income. The remaining 25% came from philanthropic donations and grants.

In addition to distribution, Common Market fulfills its mission through programmatic support to both farmers and consumers. It works with small farmers to help them “come to scale,” advising them on wholesale and retail grading and packaging, as well as on food safety plans and GAP certification. Its staff also runs programs to educate institutional food service directors and end-consumers about local, sustainably-grown food. Its product offerings reflect its values, providing wholesale quantities of local produce, meats, eggs, and value-added products at affordable prices for tight institutional food service budgets.

Frozen: Alignment with Common Market's Mission

Common Market looks for opportunities to make sustainable agriculture more viable and at the same time increase the amount of healthy local food consumed in the region. The climate in the Delaware Valley limits what farmers can grow and when they can harvest it. This means consumers have fewer choices for fresh local fruits and vegetables in the winter and early spring, while farmers wait for their fields to thaw to begin the planting season.

Light-processing of fresh fruits and vegetables, including freezing and fresh-cut packaging, has the potential to increase small farm viability while facilitating greater access to local, sustainably-grown produce for a wider audience year-round. Light processing, and freezing in particular, allows farmers to produce more during the growing

season, and then sell their product year-round without compromising its quality. Consumers in turn can access a greater variety of locally grown produce throughout the year while benefiting from all the conveniences of frozen produce: easy to store, ready to use, and less perishable than fresh produce without compromising its nutritional quality.

Institutions in particular rely heavily on fresh-cut and frozen produce. They require large volumes of product to produce meals for their many diners, and value convenience and storability. Common Market recognized that lightly-processed local produce aligned naturally with both its mission and business model, and in 2010 began exploring how to make it happen.



EXPLORATORY PROCESS

Demand Analysis: Institutional Procurement

Common Market launched its early stage frozen research in 2010 to understand the extent to which institutional customers rely on frozen produce for the bulk of their food preparation. Common Market has strong customer relationships with several hospitals, public schools, and independent schools in the region, and turned to them as a primary resource for data on frozen produce usage, including quantities needed, pack sizes, cuts, quality, and price ranges. A sample of products and price ranges is illustrated in the Table 1.

Institutional kitchens are also relying on other frozen produce including several styles of carrots (shredded, diced, sliced), cauliflower, and blends that include broccoli, water chestnuts, and other vegetables. The two frozen single vegetable products institutions purchased in the highest volumes were whole green beans and chopped spinach.

Individual institution prices varied and were based upon the volume purchased as well as the favorability of its contract terms with its primary broadline distributor.

Institutional purchasers told Common Market during these conversations that any local frozen product it offered would have to be price-competitive with broadline product. Food service management contracts and broadline distributor agreements were not the primary obstacle, as institutions can circumvent through built-in allowances for purchases through other distributors. Instead, food service budgets would be the principal determinant of local frozen produce purchases. Interviewees were enthusiastic about incorporating more local produce into their meals, but have a minimal willingness to pay more for frozen local produce. This sample of institutional purchasers demonstrated some level of commitment to local food by being Common Market customers. As such, they provide a “best case scenario” to understand the potential institutional market for source-identified local frozen produce. Common Market took the cost-consciousness of its most committed customers as a mandate to develop a local frozen product that offered the source-identification and values its customers desire and the quality, pack-size, and price they demand.

TABLE 1

Product	Style	Pack Size(s)	Price/Pound
Green Beans	Cut	10-20 lb bulk	\$0.88 - \$1.05
Green Beans	Whole	12 x 2 lb or 3 lb	\$0.83 - \$1.11
Spinach	Chopped	12 x 2 lb	\$0.86 - \$1.05
Corn	Whole Kernel	12 x 2.5 or 20 lb bulk	\$0.88 - \$1.13
Peas	Shelled	13 x 2.5 lb or 20-30 lb bulk	\$0.72 - \$1.37
Lima Beans	Shelled	12 x 5 lb	\$1.04 - \$1.36

Production and Processing: Fact-Finding Tips

In addition to assessing the market potential for source-identified local frozen produce, Common Market wanted to understand the small food processor landscape in its region. At the time, it was unclear whether Common Market's local-frozen strategy would involve partnering with an existing processor, partnering with others to launch a processing facility, or opening its own frozen processing line. In the fall of 2012, staff members of Common Market and the Wallace Center conducted a series of fact-finding trips to produce processors in the region to learn about their operations, costs, and marketing strategies.

Of the 10 sites they visited, the Burlington School Food Project, Western Massachusetts Food Processing Center and Vermont Food Venture Center provided the most relevant and dynamic examples of innovative approaches to small vegetable processing in the Northeastern U.S.

I. BURLINGTON SCHOOL FOOD PROJECT WITH MAD RIVER FOOD HUB AND VERMONT BEAN CRAFTERS

The Burlington School Food Project, the name of the Burlington School District's self-operated nutrition and food service program, is a model for institution-driven change to local food procurement and distribution. The

Burlington School Food Project (BSFP) is the largest farm-to-school initiative in Vermont, and is working to transform school food culture in the Burlington School District (BSD) and beyond. Its mission is to connect students and their families to sources of whole, fresh, local foods in order to improve their health and the health of the wider community.

Doug Davis, who directs BSFP, made the initial push to overhaul the District's food service, slowly removing high-fat processed foods like chicken nuggets and French fries and adding salad bars and more local produce. Common Market was particularly interested in how it began to source local frozen products, including vegetables and vegetarian proteins, through coordination with Mad River Food Hub.

Mad River Food Hub is a for-profit, fully equipped, licensed vegetable and USDA inspected meat processing facility located in Waitsfield, Vermont. Each processing room is available for rent by the day. The facility also offers dry, refrigerated and frozen storage as well as weekly distribution services to retail markets throughout the Mad River Valley, Waterbury, Montpelier, and Burlington. Mad River Food Hub provides business planning assistance, HACCP plan development, and access to a vast network of other food enterprises.

“ Common Market conducted a series of fact-finding trips...to understand the small food processor landscape. ”

Vermont Bean Crafters is one of the enterprises that works in the Mad River Food Hub facility. It uses local beans and vegetables to produce falafel, black bean “crumble,” blanched and frozen zucchini and broccoli and pasta sauces. Robin Morris, General Manager of Mad River Food Hub, began a conversation with Davis about BSFP procurement of Vermont Bean Crafters’ frozen local produce and black bean products. Davis agreed that BFSP would benefit from purchasing this frozen local product.

In order to sell its product to BFSP, Vermont Bean Crafters had to become a vendor through Reinhart Food Service. Reinhart is the 5th largest food distributor in the United States, and BFSP’s primary vendor. The Burlington School District is part of a cooperative of Vermont school districts, which combine their buying power to achieve economies of scale and influence in vendor relationships. The cooperative leveraged its purchasing power to compel Reinhart to approve Vermont Bean Crafters as a vendor and offer its frozen zucchini, broccoli and bean crumble to the District.

Common Market staff were buoyed by the evident success of BFSP’s local procurement and how it included frozen local product through deploying its own purchasing power. The BFSP example also illustrates how multiple partners—institution, processing center, entrepreneur, and broadline distributor—coordinated to move local value-added product into an institution in a way the area had not done previously.

II. WESTERN MASSACHUSETTS FOOD PROCESSING CENTER

The Western MA Food Processing Center (FPC) is owned and operated by the non-profit Franklin County Community Development Corporation. Opened in 2001 in Greenfield, MA, the FPC is a food business incubator equipped with commercial kitchen equipment. Both farmers and food entrepreneurs use the facility to produce value-added and specialty food products. The FPC also acts as a co-packer, and is hired to process and pack products to spec. In 2014, operations are split 60% in co-packing and 40% as an incubator.

The FPC launched a local frozen produce pilot program in 2010. The Holyoke School District, which bids its food service to a small management company, approached

the FPC asking for local frozen produce after it had heard about its co-packing operation. The district’s main stipulation, as part of its food service contract, was that the product be made available through a large distributor—to which the distributor agreed.

FPC contacted a local farmer to purchase 3,000lbs of broccoli to pilot for school food service. Freezing broccoli was a strategic choice. First, the FPC already had a relationship with the farmer who grew broccoli less than 10 miles from its facility. Second, broccoli is a product school districts are unable to get through the Federal School Lunch Program reimbursement system. Thus it is a product food service directors are already accustomed to purchasing through a vendor.

The FPC broccoli was frozen using a “sharp freezing” process: broccoli was washed, cut, and blanched in the kitchen, then packed and vacuum-sealed in 5lb bags. The bags were then packed four to a case and put in a standard food service walk-in cooler on moveable racks. Sharp freezing is a slower freezing process for more woody vegetables like broccoli, which takes up to 48 hours to freeze. The final product is frozen into a solid block and, when defrosted, can result in a significant amount of “drip,” or excess melt-off water.

The 2010 test-batch received praise from food service personnel and students alike. Demand for local frozen product continued to increase in the following years: in 2012 Western MA FPC froze 65,000 lbs of broccoli, cauliflower, peppers and carrots for distribution to several schools, universities, and a few hospitals. FPC was able to source these high volumes by (1) agreeing on a fair price for produce, often set by the farmer, (2) selling product to a well-funded district (Burlington School Food Project has a \$2.2 million dollar budget derived from subsidies including those from the National School Lunch Program and School Breakfast Program, earned revenue, and other grants) and (3) managing its labor and facilities costs to process the maximum amount of produce in a day without marginal increases in labor costs.

FPC hit its maximum capacity to do this work in 2013, and decided to scale back and evaluate its efficiencies. John Waite, Executive Director of the Franklin County Community Development Corporation and the FPC, says demand continues to increase for its frozen local product,

but its current set-up cannot meet that demand. Preparation and processing are labor-intensive, and yet limited by the capacity of the center's equipment. Waite must strike a balance between volume and labor costs to meet both farmer and customer price demands. A marginal increase in volume would significantly increase labor costs, and as a result final product cost. In April 2014 Waite was in the process of purchasing individual quick-freezing machinery which will significantly increase capacity without adding to labor costs. This expensive infrastructural investment, he believes, will pay off in the long term as the FPC will greatly increase its capacity without adding additional labor. The cost of the machinery will pay off in the increased volumes sold over the long-term.

The Western MA FPC model provided Common Market staff insight into the needs, successes, and challenges of a self-operated small-scale local produce freezing program. Unlike the Burlington School Food Project, the vast majority of Common Market's institutional partners are highly cost-sensitive despite their commitment to local purchasing. Any solution Common Market decided upon would have to respond to that sensitivity, whether through a self-operated freezing program or other model.

III. VERMONT FOOD VENTURE CENTER

Vermont Food Venture Center (VFVC) is a shared-use kitchen incubator in Hardwick, VT, operated by the non-profit Center for an Agricultural Economy. Clients rent kitchens by the hour, pay for storage by the pallet, and receive additional assistance and consultation for an

hourly-fee. Though the facility began with rudimentary equipment similar to that of the Western MA Food Processing Center, it determined the cost savings in labor and packaging outweighed the expense of adding several costly new pieces of machinery.

The 15,000 square foot facility includes three kitchens, two of which are wet preparation kitchens used for vegetable processing. It is a relatively sophisticated facility that includes vegetable slicers for several types of vegetables; a vegetable conveyor to ice, drain, and dry blanched vegetables; a gas vacuum packaging machine and chutes and scales for bagging; and a blast freezer.

VFVC began a pilot program in 2012 to test the concept of minimally-processed locally-grown vegetables for distribution to retailers and institutions. This includes providing frozen broccoli to Burlington Public Schools, one of its largest purchasers of frozen product. VFVC is thus acting as the incubator for the proof of concept, which ideally would be taken on by an entrepreneur to serve these markets.

When Common Market staff visited VFVC, Annie Rowel, who ran the frozen vegetable processing project with the help of temporary labor from area college students, emphasized two critical points. First, it is essential to keep the cost of raw materials (produce) low, recommending contracting with farmers over distributors. Second, as evidenced by their labor set-up at the time, was to keep labor costs as low as possible—student helpers received \$10 per hour.



Test-Driving Frozen

EXISTING PRODUCTS

Common Market has consistently sold a limited variety of local, frozen products. Its current product list includes frozen blueberries from Blueberry Bill Farm, sold in 30lb bags; food service-packaged frozen breaded zucchini fries, eggplant fries, eggplant cutlets, and eggplant “Naples” produced by Flaim Farm in Vineland, NJ; and frozen cranberries sold in 8lb packages, in season, from Paradise Hill Farm in Vincetown, NJ.

Flaim’s zucchini and eggplant products have been the most successful Common Market frozen vegetable products. They are ideally suited for institutional food service programs attempting to provide healthier, local, vegetable alternatives to standard cafeteria fare. Among the biggest purchasers of Flaim frozen products in 2013 were hospitals, boarding schools, universities, and community centers. In total, Common Market sold 341 10lb cases of Flaim frozen product to 24 customers in 2013.

Flaim Farm is a medium-sized family-owned farm that uses sustainable growing practices. In addition to its frozen products, Common Market purchases Flaim Farm’s fresh produce in season. While Flaim Farm produce can comprise up to 30% of Common Market’s fresh produce

inventory in season, Common Market is one of Flaim’s smallest customers; national broadline distributors and food service companies regularly fill tractor-trailers of fresh produce at Flaim’s loading docks, while Common Market’s truck accepts one or two pallets of the same product. Despite its comparatively tiny fresh produce demand, Common Market is Flaim’s largest frozen produce purchaser.

Though Common Market’s fresh produce demand may seem negligible to the farm’s success, Bob Flaim, owner and operator of the farm, sees Common Market as a critical partner because of its commitment to his frozen products. Common Market’s year-round demand for frozen product ensures Flaim has income through lean winter months. Flaim confirmed what local food advocates take for granted: producers gain valuable season-extension in the freezer that results in farm income throughout the year. Frozen produce can make sense for both institutional customers and small and mid-sized local producers.

NEW PRODUCT OFFERING

Beyond the frozen products it already kept in stock, Common Market decided to test market demand for the type of local frozen produce it hoped to provide.

“ Farmer Bob Flaim, owner and operator of the farm, sees Common Market as a critical partner because of its commitment to his frozen products. ”

In April 2011, Common Market purchased 60 9-pound units of individually quick frozen (IQF) broccoli from Winter Sun Farms in New Paltz, NY. Winter Sun Farms is a for-profit frozen food processor founded by Jim Hyland in 2006. It produces a variety of local frozen fruits and vegetables grown in the Hudson Valley region of New York State. Winter Sun Farms distributes its frozen produce through the Winter Sun Farms CSA, which has distribution centers in several areas of New York State. All of its products are source-identified with the name and location of the originating farm.

Hyland also co-owns and operates Farm-to-Table Co-packers, a full-service processing facility that includes significant freezer storage capacity. The facility includes cryogenic IQF freezing machinery, which can process large quantities of product at a time.

Winter Sun Farms primarily packs its frozen product in retail-size bags ranging from 12-16oz, much smaller than institutional food service standards. The price per pound is higher than other producers Common Market observed, including prominent organic retail brands.

Despite the cost, Common Market sampled the broccoli to institutions and retailers that had voiced interest in local frozen produce, the quality of which, they reported, was comparable to broadline IQF broccoli. After the sampling phase, however, cost prevailed over quality: several customers purchased the Winter Sun Farms product initially, but by June 2011 broccoli sales diminished to zero. The baseline price of Winter Sun Farm's broccoli plus Common Market's modest mark-up was prohibitive for institutional customers with tight food service budgets. Meanwhile retailers were not interested in paying more money for non-organic frozen produce, regardless of source-identification.

In the end, Common Market chose to cut the frozen broccoli wholesale price by more than half to spur sales before its quality deteriorated. Only when priced more than 25% below purchase cost was Common Market able to move it out of its warehouse.

Though a significant monetary loss for Common Market, it learned a valuable lesson about its customers' willingness to pay for source-identification: price outweighs enthusiasm. This was a key finding that helped inform the frozen pilot program development. If Common Market were to offer its own line of local source-identified frozen produce, it would have to meet its customers' expectations of both quality and price.

REFLECTION

Common Market researched the potential of frozen local produce by observing how others in the northeastern United States, reflecting upon its existing relationships with frozen producers, and by beta-testing frozen local produce from another processor against its market analysis findings. The study resulted in four main findings:

- Very few institutional customers have a willingness to pay more for source-identification; price point the primary determining factor, even for those institutions most committed to local procurement
- Customers value consistent product quality, which may compromise some lower-cost, remedial freezing methods
- Frozen local produce benefits farmers, and customers who commit to frozen local products are more valued by farmers--frozen local produce can help Common Market build strong relationships
- Freezing produce requires significant infrastructural investments, and infrastructural capacity can impact product quality and cost. Any commitment to processing infrastructure would need to weigh upfront costs against long-term scalability

These findings in hand, Common Market assessed different models of frozen source-identified produce production. The next section describes these models and evaluates the extent to which they meet Common Market's success factors.

MODELS OF FROZEN

“Field Scale” Processing

“Field-scale” refers to processing of relatively small quantities of produce using rudimentary machinery for preparation, blanching, packing, and freezing. The Western MA Food Processing Center’s process, as outlined earlier, is an excellent illustration of such a manufacturing technique.

PROS: It is the least-expensive facility to build, as it does not require the purchase of expensive blast-freezing or cryogenic freezing equipment

CONS: The length of the freezing process (24-48 hours or more) causes water-retention which can compromise the overall quality of the finished product. Produce frozen in this way comes out as a solid block that must be thawed and used all at once, unlike individually quick-

frozen (IQF) product, and results in a significantly greater amount of “drip” (pooling water as a result of thaw). This results in a more water-logged product that deteriorates faster and cannot be portioned out or resealed. This is particularly undesirable for institutional food service, where exact portioning reduces waste and keeps costs manageable. Processors Common Market saw at this scale process at maximum 3,000lbs per day, and per-pound prices are impacted by a variety of factors including raw product cost and labor needs.

CONCLUSIONS: Common Market determined field-scale manufacturing, while financially feasible to construct, would be a net loss due to the product quality issues, facility construction costs, and labor needs and chose not to pursue this model.

Self-Operated IQF Processing

Individually quick freezing (IQF) employs advanced freezing technology to freeze each “piece” of produce quickly and individually. Most grocery store green peas, for example, are individually quick frozen: frozen peas are loose in the bag, as opposed to being frozen in a solid block. IQF technology requires product be arranged in a single, spaced layer on a conveyor belt that runs through the IQF tunnel, wherein product is “suspended” in a super-cooled freezing medium (either force-cooled air or liquid nitrogen). The result is a separable, portionable frozen product that maintains its quality once thawed and cooked.

PROS: Industry-standard quality of finished product; can be scaled to process small or large quantities of product; complete control over the process; potential to offer excess processing capacity as a co-packer; no like facility in the Philadelphia region at the time means no competition for co-packing services.

CONS: IQF equipment is cost-prohibitive for many small and/or non-profit food distributors (a feasibility study for a similarly-scaled operation priced the purchase and installation fee at \$90,000); extra storage capacity needed to hold finished product; large start-up costs means equipment off-line time adds to the cost of each unit of finished product; unpredictable market demand for end-product heightens risk.

CONCLUSIONS: Building a self-operated IQF system, while a significant and risky investment in the short-term, could provide benefits to both the operating business as well as to local producers and potential partners and food processing entrepreneurs. The high cost of equipment and build-out adds significantly to the final product cost when the facility operates below capacity. While a self-operated IQF facility has the potential to scale, it is unclear whether Common Market would achieve necessary scale in either supply or demand.

Co-packing

Several IQF manufacturers offer co-packing services, in which the co-packer receives raw product from the contracting farm or company, and processes it to the contractor's specifications. Farm-to-Table Co-packers, mentioned previously, is an example of a producer that offers such services.

PROS: The burden of equipment purchase and operation does not fall on the contracting company (in this case Common Market); can choose to work with a co-packer that already values and has mechanisms in place for source-identification; can choose to use product from farms Common Market already works with, pending sufficient volume at a single time; quality of product is (or should) be to contractor's specifications and is therefore predictable.

CONS: Minimum volume requirements for processing (for example, one processor in our region requires a minimum of 7200lbs of green beans to process them); high manufacturing costs; cost of shipment of raw product to co-packer, with added cost of potential loss or damage to product during transport and manufacturer surcharges

for product that reaches the co-packer that is unusable; cost of shipment of finished product; additional storage needed to hold finished product; less control over process.

CONCLUSIONS: Though co-packing is a significantly smaller investment than building and operating a processing facility, Common Market was wary of its risk and cost. First, it had never made a single bulk purchase of the necessary quantity to meet co-packer minimums. Many of its farms are too small to provide a large quantity of produce, and arranging for that quantity of produce at a single time would take extensive pre-harvest planning. There are further logistical needs leading up to harvest, including timing the harvest with the co-packer's availability, scheduling transport of raw product, and pick-up of final product. Common Market has limited freezer space, meaning it would have to build or rent additional freezer space. Common Market concluded that the risks and costs associated with co-packing would result in a product that did not fall in our customers' acceptable price-per-pound range, and would therefore be a bad investment.

Purchase Local Source-Identified Product from Regional Processor

There are several large processors that value sustainable growing practices and source identification, even if their main customers do not have that value. They contract with farmers to grow vegetables to spec, even going so far as to give the farmers the seeds and tell them when to harvest. Due to their scale and sophistication, they are able to track their products back to the exact field they were harvested from (which is increasingly important for food safety and traceability).

While larger processors often pack for large frozen produce companies like Birdseye or Green Giant, some will partner with smaller purchasers to co-brand or rebrand a product they already produce. They require a minimum purchase amount, and limit the different types of pack-sizes per lot purchase. This also means that the purchaser must have adequate freezer capacity or the means to rent freezer capacity at the processor's facility or elsewhere.

PROS: No burden of equipment and operation purchase and risk; highly sophisticated operations mean high-

quality product; economies of scale mean a lower per-pound cost of final product; often a vertical supply chain which cuts down on cost and risk; traceability and source-identification are not compromised.

CONS: Potential for customers to perceive the product is "not special" or a form of "greenwashing" because it may be the same product distributed by a major frozen food brand; large up-front cost of purchase; construction or rental of added freezer capacity.

CONCLUSION: Common Market concluded it would further explore this type of arrangement, but any final agreement would depend on several factors: sustainable production processes at the farm and processor level, ability to label the product with both Common Market's brand and the farm name, a final price that would meet institutional food service needs, and the capacity to store the finished product either at the processor's facility or another rented freezer space.

Finding a Model-Market Match

Entrepreneurs, organizations, and public entities are developing a variety of models to make local, source-identified frozen produce available to individual customers and institutions. Facility needs, raw product quantities, processing costs, and finished product quality are just a few of the factors Common Market took into consideration when deciding how it wanted to approach a local-frozen line.

The Table 2 below outlines some of Common Market’s factors and criteria used to meet its designated market’s demand.

The site visits and research helped refine Common Market’s understanding of institutional customers’ expectations and the extent to which each type of frozen processor could meet those expectations. It was important for Common Market to define its target customer and that customer’s needs at the outset. This curtailed the project into a discreet, manageable pilot with scaling potential. Rather than try to be all things to all frozen produce purchasers, Common Market aimed its efforts directly at its mission—supporting both farmers and people with limited access to local food.

TABLE 2

Customer Type:	Institutional Food Service (primary), Retailers
Facility Needs:	Do not want to construct a facility; partner with existing processor
Product Variety:	Launch project with one product commonly used by institutions: green beans or spinach . Evaluate further customer needs and producer capacities for more product after launch
Pack Size:	Food service standard: 2-3lb bags, 12bags per case
Product Quality:	Grade A IQF
Per-Pound Cost:	In institutional range, product dependent: for example, \$0.86 - \$1.05 for spinach

THE OPPORTUNITY

During the course of its site visits, Common Market learned about and visited Seabrook Brothers and Sons, a frozen vegetable processor located in southern New Jersey. Less than 50 miles from Common Market's Philadelphia

warehouse, Seabrook's location, scale, business model, and values are uniquely suited to fulfill Common Market's needs while simultaneously aligning with its mission.

Seabrook Farms

Seabrook Brothers and Sons (Seabrook) is a third-generation family-owned-and-operated farm and frozen produce processor. It freezes 110 million pounds of local produce per year using multiple IQF lines. It also purchases and repacks an additional 90 million pounds of produce from elsewhere, particularly that which cannot be grown cost-effectively locally. Its product list includes multiple cuts of green and wax beans, green peas, whole kernel and cob corn, IQF spinach and other leafy greens.

Seabrook has its own private retail label, called Seabrook Farms, and packs for large national retail brands and food service suppliers. Seabrook is accustomed to packaging and labeling its products to purchaser specifications, and most broadline brands omit source-identification to maintain consistent brand-identity. Large frozen produce brands value uniformity and consistency, and source-identification can seem at odds with these values.

Seabrook has contracts with farmers in New Jersey, Pennsylvania, Delaware, and New York to grow produce for processing based on its sales needs. The primary reasons for its regional preference are product quality and shipping costs: by keeping freight costs low and quality high, Seabrook can ensure a consistent, high-quality product at appropriate price points for retail and institutional purchase. Much of the produce Seabrook

processes is actually fresher than produce an individual might purchase at a farmers' market. For example, green peas must be frozen within four hours of picking, so it is imperative that they are grown close to the processing plant.

The proximity of its contract farms helps Seabrook's field managers ensure growers adhere to strict environmental and product quality standards that further its sustainability mission. Growers commit to both a soil erosion-prevention program and Integrated Pest Management (IPM) practices. Seabrook processes vegetables throughout the year, and thus has a highly sophisticated planting and harvesting schedule with its contract growers. In many cases it manages the crop completely, from provision of the seed to timing the harvest.

The Seabrook family has been growing vegetables in the same area of southern New Jersey for over 150 years, and see themselves as environmental stewards committed to sustainable agricultural practices. Its processing facility has undergone changes to minimize waste and improve energy efficiency: its impressive features include a 38 acre 6-megawatt solar plant and a comprehensive recycling program for cardboard, paper, vegetable waste, water, oil, scrap metal, and waste heat from its natural gas generator.

Product Sampling

Common Market was impressed by Seabrook's scale, sophistication, farmer relationships, and sustainable practices, and was anxious to sample their product. While Seabrook processes a wide variety of vegetables, Common Market determined that either green beans or spinach would be an appropriate "pilot" for two reasons. First, Seabrook confirmed that its green bean and spinach growers were held to the highest sustainability standards of all its contract growers. Second, these are the vegetables Common Market's institutional customers purchase in the highest volumes.

Seabrook provided samples of its Grade "A" Fancy Whole frozen green beans, which Common Market distributed to some of its institutional customers, and sampled among its procurement and sales staff. Both customers and staff noted both the size and cut of the beans varied more than they were accustomed to seeing in national brand frozen green beans. It is possible the samples were an anomaly among Seabrook's high-quality product, but as Common Market was about to make a large investment in its first frozen product, it focused on finding a high-quality product of demonstrable consistency.

Seabrook's IQF chopped spinach was the second trial, and was a resounding success. Common Market returned to the same institutional partners that had previously tried the frozen green beans to test the spinach. These testers praised the spinach taste and quality in their feedback. They were also pleased that IQF spinach is not frozen into a solid block, unlike sharp-frozen spinach, and therefore could be more easily portioned for improved portion control and less waste. High quality, great taste and ease of use would convince these customers to switch to local source-identified frozen spinach, so long as it was available at the right price.

Based on their positive experience with the IQF chopped spinach samples, six of Common Market's largest institutional food service customers indicated they would commit to purchasing frozen chopped spinach from Common Market instead of their broadline distributors. Buoyed by these tentative commitments, Common Market returned to Seabrook to establish farmer connections and negotiate purchase volumes and prices for its first branded, source-identified, frozen local product.

“ High quality, great taste and ease of use would convince customers to switch to local source-identified frozen spinach...at the right price. ”

Dusty Lane Farm

Brian Seabrook, Seabrook's sales manager, arranged for Common Market staff to visit a farm with which the company contracts and which he felt particularly met the Common Market mission. Dusty Lane Farm, operated by Michael Brooks, is in Elmer, NJ, just 10 miles from the Seabrook processing plant. Common Market staff met with Mr. Brooks, a 9th generation farmer, in the summer of 2013 to understand more about his farm, his story, and his spinach.

Dusty Lane Farm has a strong sustainability program. It uses IPM practices which include choosing disease-resistant crop varieties, strategic crop rotation for pest control, and careful monitoring of fertilizer and pesticide applications to prevent overlap and excess use. It also has

several protocols in place to conserve energy and water on the farm.

Along with his father William, Michael Brooks specializes in growing crops for processing. Dusty Lane grows spinach and sweet corn for freezing at Seabrook, potatoes for Herts and Utz potato chips, and plum tomatoes for the popular Jersey Fresh Canned Crushed Tomatoes. Mr. Brooks plants 180 acres of spinach for Seabrook twice a year for spring and autumn harvests. The varietal he chooses for its autumn planting is disease resistant with substantial body, which results in a good yield after freezing. When kept frozen the spinach has a two year shelf life.



Volume and Costs

Once it determined it wanted to purchase Dusty Lane Farm's spinach, Common Market worked with Seabrook to negotiate the volume, price, and product specifications both parties required. Common Market presented Seabrook with its market research from its institutional customers, including the price-point at which they would be willing to purchase frozen local spinach, knowing it would not be able to sell any product beyond the customers' acceptable price range. Common Market also wanted to include its name and the name of the farm on the package, an added cost which Seabrook would only be able to achieve at a substantial volume. The product also needed to meet institutional food service specifications for quality and pack size.

Seabrook, meanwhile, had to find an arrangement whereby its economies of scale enabled it to meet all of Common Market's requirements through efficient volumes. It calculated Common Market would have to purchase at least one truck-load—or 40,000lbs—of finished product in order to achieve all of its aims, particularly price. Common Market agreed to purchase 36 pallets (1,765 cases at 24lbs. per case, or more than 42,000 pounds) of IQF ¼" chopped frozen spinach, grown by Dusty Lane Farm and processed by Seabrook Brothers and Sons. The

spinach is packaged in 2lb clear poly bags, and packed 12 bags per case. The cardboard cases are ink jet printed with Common Market and Dusty Lane Farm's names and locations.

Because Common Market has limited freezer capacity, Seabrook agreed to store the spinach at its New Jersey facility. Common Market is charged \$0.01 per pound per month. This arrangement is more cost-effective than Common Market's purchase and operation of an additional freezer unit. Seabrook charges Common Market only for the pallets still in stock at its facility. This means the more quickly Common Market can move pallets from Seabrook to its own facility and out to customers, the less it has to pay for storage per month. Common Market must retrieve spinach by the pallet and can pick up as many pallets as it has room for in its single freezer unit.

Seabrook required a one-time upfront payment for the product and processing. Additional storage costs are billed to Common Market monthly.

Common Market picked up its first 80 cases of source-identified, local frozen spinach on October 17, 2013.

PROGRESS AND POTENTIAL

Common Market began selling its frozen spinach immediately, and demand for it has steadily increased since October 2013. While Common Market is helping some institutions marginally improve their sustainability, it recognizes that, on the whole, its impact is quite small.

This section describes some of Common Market's early success and its challenges. It also discusses the larger goals of source-identification and changing the industry standards in food service procurement.

Commitments and Successes

Institutional partners provided not just cost and quantity expectations for frozen produce, but promised to switch to local frozen produce when it became available. In effect, Common Market was cultivating soft sales commitments with institutional customers as early as its discovery stage. As it reached its agreement with Seabrook and got closer to a spinach-delivery date, it aimed to firm up these commitments.

Throughout the summer of 2013, Common Market staff met with food service directors, sustainability coordinators, and other high-level staff of several of its most dedicated school and hospital customers. It offered volume discounts based on 1-year purchase commitments: 5% discount for a two pallet commitment, and 10% discount for a four pallet commitment. Institutions that made such commitments were not asked to sign any type of agreement; rather Common Market chose to promote its frozen produce line using the same trust-based relationship-oriented approach that successfully grew its other wholesale sales.

In effect, the volume-discount commitments were demand-seeders and testaments of Common Market's commitment to its customers. Over a year had passed since Common Market first spoke with some of its institutions

about the potential for frozen local produce, and several had given feedback on product samples in the pilot stage. In offering volume discounts to its valuable partners, Common Market hoped to pique their interest early, provide monetary incentive to continue the partnership, and prime customers to change their frozen produce purchasing habits.

Several institutions became fast and steady purchasers of several cases of spinach per week. Cooper University Hospital, at that time Common Market's oldest and most committed customer, added the spinach to its large orders and to its local-oriented patient and staff menus. The Jewish Federation of Greater Philadelphia added the spinach to its food pantry offerings, where it has become a favorite with pantry shoppers because it is less perishable than fresh produce. And Jefferson University Hospital has completely substituted Dusty Lane Farm spinach for its old broadline-distributed spinach with astounding results.

Some institutions have been slow to add spinach to their orders in meaningful quantities. While Common Market found a solution to the supply-side of the local frozen equation, the next sections present several demand-side obstacles to greater impact, and opportunities to overcome such challenges.

Challenges and Opportunities

CHALLENGE: GPOS

Group purchasing organizations (GPOs) contract with hospitals and food service companies to aggregate demand for various products in order to leverage purchasing power to get discounts and rebates from vendors. GPOs develop relationships and contracts with “prime vendors,” often national or multinational distributors, to establish bulk-purchasing discounts, rebates, and other reductions. Institutions that hold contracts with a GPO are compelled to make the majority of their purchases (usually around 80%) through the GPO prime vendors in order to receive discounts and rebates.

These agreements make it difficult for small distributors like Common Market to sell to institutions. While an institution can purchase 15-20% of its products from alternative channels, small distributors end up competing with the convenience and cost-competitiveness of prime vendors. Many GPOs and food service companies also require the small distributor to go through an approval process before selling to an institution. Institutions can request approval of non-prime vendors, and then use their allocated percentage to purchase from that vendor, but the multi-step process is onerous for food service directors strapped for both time and money.

Common Market faces this challenge with many large food service management companies and some hospitals. Its most committed customers are operated by smaller food

service companies with a demonstrated commitment to local and sustainable food; well-funded self-operated food service departments that do not have such commitments; or highly committed institutions that make creative use of their 15-20% allotment to make purchases from Common Market and cut costs elsewhere to make up the difference. But these are exceptions to the rule: most food service purchasing is bound by these contractual agreements.

OPPORTUNITY: REBATES

Because it did not require customers to contractually commit to volume discounts, Common Market has no assurance other than good faith that institutions will purchase the quantities upon which they previously agreed in order to receive a discount. GPOs and prime vendors offer rebates instead of discounts. While Common Market is not yet logistically capable of issuing rebates, rebates present an opportunity that will likely have more applications in its future.

Using this model, Common Market could issue a rebate for the total discount upon institutional fulfillment of its commitment. This would encourage customers to meet their commitments quickly while helping Common Market move more spinach and reduce its storage fees. Most food service departments and their business managers are accustomed to this rebate process, so it would not be out of the ordinary to make such a commitment.

CHALLENGE: MOVING BEYOND THE BASE

As stated above, Common Market's institutional food service customers represent the exception rather than the rule. Sustainability, source-identification, local food, and more intensive food preparation are de rigueur at these institutions. Many are self-operated and can choose their vendors freely, while others' fierce commitment to local food empowers them to work around other purchasing agreements.

Institutional food service operated by large food service management companies is a much larger segment of the market that has yet to be fully tapped by both Common Market and the regional source-identified food movement. Aramark, Sodexo and similar national companies manage the majority of the institutional food service operations. They have purchase agreements with broadline food service distributors which inhibit institutional access to other vendors or distributors.

Due to their size, large food service management companies are able to offer cash-strapped institutions a cost-effective alternative to self-operated food service. This is particularly the case for many K-12 schools in low-income areas that have small food service budgets. However, these are often the schools serving the highest percentage of poor children from underserved communities, which is the very population Common Market aims to access.

Local, sustainable, and/or small-scale food often cannot compete on cost alone. Additionally, many institutions are ill-equipped to perform even basic food preparations. Thus, for its first several years of business, Common Market did not even approach institutions under contract to large food service management companies as the required effort seemed to outweigh the potential gains. Frozen local produce—a year-round, sustainably-grown produce product—is an excellent first step toward cracking into distribution of local foods to large food service management companies. With sufficient volumes and competitive price-points, Common Market and Dusty Lane's frozen spinach has the potential to speak to the values of food service companies' diners, as well as speak to the budgetary constraints of most food service companies.

OPPORTUNITY: BROADLINE DISTRIBUTION

Common Market is exploring the potential to tap into other distribution networks. Western MA Food Processing Center is an excellent example of a small local-frozen operation that sells its products to local school districts through their primary distributor. That directive, however, came from the school district, and the distributor was relatively small in comparison to Sysco/US Foods.

The easiest way for schools under contract to food service management companies to include local frozen produce in their menus is to purchase it from distributors with which they already work. Such an arrangement between Common Market and another distributor would have logistical advantages and the potential to move more local food into more institutions.

On its face, this opportunity presents many questions: would broadline distributors demand a lower price than that which Common Market offers its customers directly? Would Common Market and its farmers be able to keep up with demand if added to broadline distribution? What are the chances a broadline distributor would side-step Common Market's relationships with its vendors and begin purchasing directly from farms? What are the implications of any of these possible consequences on the broader food movement in the Delaware Valley region, and what might it portend more broadly across the "good food" sector? This case study does not attempt to forecast the outcomes that answer these questions; rather it leaves open the possibility that such partnership may be advantageous to regional food systems and actors within them.

CHALLENGE: CHANGING THE INDUSTRY STANDARD

By and large, the frozen produce industry favors quality and consistency over source identification. Small frozen processors are able to achieve source identification because they work directly with producers, but can sacrifice supply consistency and product quality. Small producers are more sensitive to the effects of inclement weather, market shocks, and logistics inconsistency; serious shortfalls can diminish the quality or quantity of frozen local product

from such small producers. At the same time, small processors' equipment may not be top-of-the-line and, as a result product quality may be lacking in comparison to nationally-distributed branded product.

Meanwhile, consumers value and use frozen produce differently than fresh. Their willingness to pay a premium for sustainable, source-identified frozen produce is more limited than for fresh because of their preexisting associations and valuations of frozen produce. A frozen produce aisle at a grocery store does not have a farmer's market's benefit of a farmer's personage attached to the product. The benefits to regional farms through frozen local produce are less tangible for the consumer than at a farmer's market, or even through a CSA or farm box program. Any attempts to rectify this must adopt the stories and mechanisms of fresh local produce for the frozen produce industry.

As evidenced by Common Market's frozen spinach pilot program, these standards and goals need not be mutually exclusive. Common Market partnered with a local sustainable farm that harbors far more production potential than Common Market could undertake at the time. Access to good agricultural land, appropriate on-farm technologies and the farmer's attention to market demands are just three ways Common Market was able to ensure its product availability and consistent quality. It is this same scale that makes it possible for Common Market to add value without increasing prices. Seabrook already harbored source-identification capabilities: Common

Market found a way to tap into this form of transparency without increasing costs.

OPPORTUNITY: MAKING VALUES THE STANDARD

Common Market, and other food distributors with similar values, see vast potential in putting source identity back into the frozen equation. Our customers told us they would like more source-identification, as did those customers of the processors described herein. Instead of competing on a cost-only basis, organizations like Common Market can promote year-round viability of local farms and sustainable growing practices for a marginal cost increase. Communicating values associated with such frozen products, it can help change consumer perceptions of frozen produce and seed consumer demand to change the industry standard.

Common Market heard from its institutional purchasers that they were interested in incorporating more local produce into their menus because they wanted to show support for local farms, local economies, and sustainable agriculture. At the same time, it is possible that many of these customers were purchasing frozen local produce that was packaged for broadline distribution and not source-identified. What Common Market accomplished in its partnership with Seabrook and Dusty Lane was making the values—source-identification and sustainability—transparent for a product that already has economic value for the farmer and a nutritious local product easily utilized by institutional food service. Common Market adds value to product through its transparency and espousal of the values behind the production.

“ Communicating values associated with local, source-identified frozen products can help change perceptions of frozen produce and seed consumer demand. ”

Current and Future Impact

Through the frozen local pilot program, Common Market is able to offer its customers another way to access sustainably-grown, local produce year-round. Although current offerings are limited, the program and its development provide valuable insight into what is needed in order to move towards more localized, source-identified frozen products. For future frozen program development, it is important to recognize the limitations of this pilot.

First, it did not significantly change the farm's or processor's operations. Seabrook has contracted with Dusty Lane Farm for several seasons, and both have well-established product quality and sustainability standards. Common Market tapped into their operation and diverted a small portion of their product into its own distribution stream. The small processors profiled herein, along with several others around the country, were launched in part to give small farmers a means of post-harvest season extension. While Common Market's model is a form of season extension, the farm, in this particular case, would have moved its product to the processor and sold it regardless of Common Market's involvement.

Second, at the time of writing, Common Market has lim-

ited capacity to significantly grow its sales to institutional food service. This is in part due to the impediment of large food service management companies (see above) and in part the significant staff-hours required to educate institutional food service directors and help them slowly change their purchasing practices. Even Common Market's best customers require reminders and nudges to keep local sustainable product on their minds as they compose their menus and place weekly orders. Common Market's small staff runs out of hours in the day to do extensive outreach alongside the operational duties of moving food from farms to forks.

Despite these limitations, Common Market is confident its model will increasingly make an impact on institutional food service norms, frozen food industry standards, and advancement of small and mid-scale farm viability in the Mid-Atlantic. Frozen spinach customers praise it for its quality, flavor, and ease-of-preparation, with limited or no budgetary impact. Common Market plans to survey its customers and test other potential products in order to provide more year-round options.



CONCLUSIONS

This case study traces Common Market's path from discovery to delivery of source-identified, sustainable, local frozen spinach. As a social enterprise committed to farm viability, sustainability, and food access to underserved constituencies, pursuing a local frozen product line was a natural progression of its product development.

As explained herein, there are several ways of achieving the frozen local goal. Common Market's partnership with a nearby frozen processor and one of its contract farmers offers the product quality and price-point its customers demand without the costs, inefficiencies, or quality issues of constructing its own facility. By partnering with

existing frozen produce processors, Common Market was able to change the industry standard in one instance, and prove that the "local food movement" can benefit from economies of scale without compromising its values.

The local food movement is at a critical point: large companies now see value in using "green" and "local" rhetoric, while more and more entrepreneurs and non-profits are entering and competing for both farm product and consumer demand. Even in its nascent stages, Common Market's local frozen spinach is a success story of working from within the prevailing system to spur systemic change.

“ The local food movement is at a critical point: large companies now see value in using “green” and “local” rhetoric, while more and more entrepreneurs and non-profits are entering and competing for both farm product and consumer demand. ”



This is an independent case study by Common Market, with funding assistance from the W.K. Kellogg Foundation facilitated by the Wallace Foundation at Winrock International. To find out more, contact Common Market at info@commonmarketphila.org.

commonmarketphila.org

Design: www.anagramist.com. Photos © Common Market except where noted. Printed on recycled paper.