

The **Jefferson Area Board for Aging** of Charlottesville, VA, received **\$54,834** to study the feasibility of building a bulk freezing and frozen meals operation to use Virginia-grown food to provide meals and products for senior nutrition programs, home delivered meals, schools, and child daycare.

[Final Report FY10](#)



**DATE:** 7/9/12  
**RECIPEINT:** Jefferson Area Board for Aging  
**TITLE:** Community Food System Project Phase III: Studying the feasibility of a frozen food operation based in Virginia that uses locally grown food from the region and state that provides meals for non-profit institutional feeding programs.  
**NUMBER:** 12-25-G-1202  
**AREA:** Charlottesville, VA

**PROJECT SUMMARY:** In response to the prevalence of diet-related diseases in our area, JABA began exploring ways to increase the nutritional value of its meals. More and more research has emerged about the benefits of eating locally raised food—higher nutrient content, fewer harmful pesticides and fertilizers, smaller carbon footprint, positive impact on local economies, and just as important, better flavor!

**PROJECT APPROACH:** JABA has completed a feasibility study for a business which will use locally-grown fruit and vegetables to produce flash-frozen bulk packages and individual meals for other Area Agencies on Aging, Meals on Wheels organizations, schools, universities, hospitals and nursing homes. Studies show that flash-freezing is the best way to retain nutrition, taste and texture in produce. The results of analyses indicate that the operation could generate sales in the range of \$3 to \$5 million and could be profitable at this level. There are no known competitors offering flash-frozen local produce.

The mission of JABA's flash-freezing enterprise is to increase the year round availability of nutritious, Virginia-grown food to all Virginians through an economically viable business operation consistent with JABA values.

**GOALS & OUTCOMES ACHIEVED:** The goal of the project is to determine the feasibility of building a profitable frozen food operation in the central Virginia area using locally sourced and Virginia-grown food for individual frozen meals and bulk frozen produce for non-profit meal programs.

**BENEFICIARIES:** JABA alone sends nearly 50,000 meals each year to homebound seniors. The frozen prepackaged meals we distribute are purchased from a supplier in Florida. And while these meals are adequate, JABA believes that developing a local facility could result in fresher, more nutritious and economical meals with a smaller carbon footprint. Virginia has 25 area agencies on aging that, together deliver over three million meals a year to our seniors. We saw an opportunity to provide nutritious meals to a typically diet-poor population, while increasing the market for Virginia grown foods!

In addition, more institutional feeding programs want to add local food to their menus and provide healthy alternatives for all age groups and economic sectors. Public and private school systems, colleges and universities, and area agencies on aging that wish to use local food are faced with the lack of infrastructure and systems for traceability that are required for their food service requirements. A flash freezing facility could answer these needs as well as provide the following benefits:

- Increased market demand for Virginia-grown food and fair market prices for farmers that can reduce the carbon footprint experienced by the current sourcing of institutional feeding program suppliers;
- Employment opportunities in both farming (caused by increased demand for product) and at the facility (15-25 jobs at the processing plant). We are also assessing opportunities to employ 'work-release' inmates from Department of Corrections or workers with disabilities;
- JABA's share of the profits will be allocated to community and home-based services for low to moderate-income individuals and their family caregivers;
- Increased access to healthy food by all consumers, regardless of age or socioeconomic status – school food programs for instance will bring special benefits that can lower childhood obesity;
- Increased application of ecologically sound water recycling and composting;
- Increased opportunities to educate farmers on TMDLs and environmentally-friendly farming practices (as a major buyer this facility will encourage and incentivize its suppliers to participate in training—offered by other organizations—and eventually require suppliers to phase out harmful farming practices);
- Creation of a replicable model for other states to build their own facilities and effect change in farming practices.

#### **LESSONS LEARNED:**

Demand: Our 93 surveyed institutions (a 59% response) reflected the high interest of the general public in obtaining local produce. The cost of transporting products across great distances reinforces the desire to eat better tasting and more nutritious food. While most potential customers are price-sensitive they are willing to balance this against the recognized nutritional and taste benefits of flash-frozen local products. Our moderate-case estimates indicate attractive sales targets for the first full year of operation for frozen meals, bulk product to educational institutions, and bulk product to senior service & healthcare providers.

- Universities and Colleges have a high interest in local fresh and local IQF produce. They are high-volume users and they are much less price-sensitive since students “want what they want and are willing to pay for it.” This is a prime target, but there are relatively few of them.
- Area Agencies on Aging are sensitive to the nutritional value of their food due to government regulations, but most are constrained by tight budgets. They are price-sensitive. They are major purchasers of individually prepared meals for the homebound. JABA's strong reputation in this segment, as well as endorsements from the Virginia Department for Aging, will make it much easier to penetrate.
- Public School Districts buy large amounts of food. Although efforts are underway to improve nutrition, children are more interested in pizza than fruits and vegetables. School systems are also under great budgetary constraint. Over time this will become a prime market segment as parent and legislative pressure grows for more nutritious meals.

- Nursing Homes prepare scratch meals and are regulated. However, most are owned by 'for-profit' corporations that set very tight cost standards. Sourcing decisions are usually made at the corporate level and are very competitive. Although this is a large potential market, it will take time to build market share and encourage customer demand for the best product available.
- Hospitals have complex dietary requirements. Building major sales in this segment would create a challenging scheduling environment in the processing facility.

#### Supply:

With few exceptions (carrots, onions and spinach) there are ample supplies of a wide range of Virginia-grown fruit and vegetables at competitive prices. Wholesalers, farmers and Agriculture Department officials indicate a strong interest in developing a market for #2 grade produce. This product has color, shape or surface features that are unacceptable to most retailers but still has all taste and nutritional qualities. It is usually left to rot in the field or is composted. Use of #2 grade product brings average savings of 30% to 70% according to industry sources.

#### Facility and Equipment

A process engineering firm was retained to provide a preliminary design of the facility and to specify equipment requirements. Final design will depend on the facility and equipment that a potential partner might have. Grants and low-interest loans will also be sought in order to defray the capital investment. The flash-freezer, at approximately \$600,000 is the most expensive piece of equipment. For purposes of testing financial viability we have based our estimates on a new free-standing facility and equipment, with the following fixed assets:

- Building, offices, and frozen and refrigerated storage \$2.1 million
- Processing, kitchen and flash-freezing equipment 1.2 million
- Land – 3 to 5 acres with adequate paving .2 million

#### Labor

There are several options for staffing the organization. The specified equipment automates much of the processing. However, we may choose to have less automation and use more labor from disadvantaged populations, for example, handicapped, incarcerated or veterans. The number and cost of senior staff will depend on the existing capabilities of the partner who, for example, might have existing processing operations, QC staff and a sales organization. The business will employ 15+ people, with an annual cost of approximately \$410,000.

#### Financial Projections

Financial modeling of the free-standing operation indicates favorable potential results. The projections are based on a moderately conservative model of sales, costs and investment. These estimates can be significantly improved with the appropriate partnership.

- A start-up loss of approximately \$.9 million
- Total capital required estimated at \$5 million – assets, start-up costs, working capital
- Sales rising from \$3.0 million in the first full operating year to \$5.1 million in year five
- Return on sales expanding with volume from 1.4% in year one to 7.9% in year five
- Return on capital investment rising to approximately 8% in year five.

#### Partnership Benefits

JABA believes it is essential to have an experienced partner to undertake this business. Ideally the partner will have underutilized facilities, processing operations and significant procurement expertise. The partner will also be expected to share in the capital investment. In addition to a share of the profits, the partner will gain other important advantages.

- An expanded product line to offer its existing customer base
- Access to a new set of customers through the attraction of the JABA image
- Greater leverage in produce purchasing and reduced unit costs of processing
- Opportunities to co-pack for others or to create new branded products
- Higher utilization of facilities, distribution systems and other capabilities.

Summary of Lessons Learned:

Data from the feasibility study shows the following:

- the supply of Virginia-grown produce is more than adequate to meet our needs
- demand for frozen local produce is very strong on the institutional level
- farmers produce a large amount of grade 2 and 3 produce (fruit and vegetables with cosmetic blemishes that are not acceptable to major retailers, but is otherwise of #1 quality), but currently have no market to which to sell it
- our financial model shows profits to be favorable
- the right business partner(s) is essential in making this venture most profitable.

JABA's flash-freezing enterprise is an innovative program with seven primary goals.

1. Increase the availability and affordability of safe, competitively-priced, high-quality and nutritious Virginia grown food.
2. Create a healthy frozen food source for use by public and private providers of meals to senior citizens, students, hospital patients and others.
3. Expand sustainable markets for local farmers and enable them to increase their incomes by selling #1 grade produce at fair prices and #2 grade produce that does not currently have an established market.
4. Advance the use of environmentally sound agricultural practices that preserve watersheds and maintain safe water supplies.
5. Create job opportunities with a focus on persons who experience barriers to employment (e.g. the handicapped, people in prison-release programs or the long-term unemployed).
6. Contribute a consistent and positive revenue stream to JABA to meet its charitable purpose.
7. Create a successful business model that can be copied by non-profit organizations, farmer associations and food entrepreneurs in other communities.

Now is an excellent time to enter this market segment. Customer demand is high and there are no local competitors offering flash-frozen local produce. We expect that public and private grants and low interest rate loans will be available to a credible business partnership. Moreover, it is possible that the business model can be replicated in other areas with a high interest in flash-frozen local food.

**CONTACT PERSON:** Judy Berger at [jberger@jabacares.org](mailto:jberger@jabacares.org) or 434-817-5234.

*JABA's Mission: To promote, establish and preserve sustainable communities for healthy aging that benefit individuals and families of all ages.*