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Feasibility Study for a Leased Vegetable Storage Facility

Prepared by Rose Wilson 5/5/2014

Executive Summary

This study was undertaken by Northern Community Investment Corporation, (NCIC), to explore the demand and feasibility of a regional shared-use, lease-based, seasonal root crop vegetable storage facility. The study found that approximately 61% of commercial growers would be interested in shared use storage if it were convenient to them and affordable. Producers suggested \$5 per pallet per month as a fair fee for the service, and any given location would likely secure an average of 88 leased pallets. At this rate, the operation would generate \$2,200 per year in gross income, yet costs to operate the facility would run approximately \$17,969 per year, leaving the facility with a net annual operating deficit of \$15,769. The cost to build new or retro-fit an existing space to meet the needs of a seasonal root vegetable storage facility are projected to average \$54 per square foot.

While this opportunity may not be commercially viable as a stand-alone enterprise, given the demand for storage could support growth of the region's commercial agricultural sector, the facility could be appealing as a public-private partnership that could leverage other sources of operating capital such as foundation funding, government support, and fund-raising initiatives. Given the nature of the need is seasonal and part-time, it could also become a service absorbed into an existing business or organization who can offset some of the overhead and operating expenses by cost-sharing expenses and assets with pre-existing programs.

Overview

As the local food movement continues to grow in Vermont, New Hampshire, and Maine, there has been an increasing sense of a regional lack of dry goods storage. Every year Pete Johnson of Pete's Greens has been fielding calls from 5-8 local growers requesting to lease space from his private use storage facilities. Pete estimates that between 30-40 farms in the North East Kingdom have storage needs beyond a summer cooler. He believes they are either: building storage on site, leasing storage, or needing storage but lacking the financial means to acquire it. A survey sent out the North Country Farmer Cooperative members and to the Vermont Vegetable and Berry Growers Association confirmed there were at least three North Country farms and eight North East Kingdom Farms interested in leased storage in Northern Vermont-New Hampshire. Of 18

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total respondents, this represents 61% of growers expressing an interest in off-site or increased storage capacity. A similar survey was being conducted in Northwestern Vermont regarding the same concern.

The closest commercially available leased storage facility to the North East region is in Williston, Vermont. This distance makes the facility both inconvenient and expensive. The question has thus surfaced, “is there a way to offer leased storage space in the NEK/North Country?” Pete’s Greens is constructing a 3,000 square foot, 24 foot high storage facility for its own needs. Initially, Pete thought the company would only require one to two thirds of the space, potentially enabling leasing of the space to other growers. If 1,000 square feet (24,384 cubic feet of space) were portioned off for shared use, the facility could accommodate up to 360 pallets for regional growers (assuming an average pallet is 4’x4’ and is stacked about 4’ high). Pete also noted his company has an unused root cellar that could be refurbished for group use. There is also a “community root cellar” in Hardwick, and movement is afoot in Groveton to explore retrofitting an existing commercial building into a value-added production space with multi-use dried storage capabilities. With all these possibilities, this study was undertaken to provide a general feasibility analysis of this type of operation. The study devised a pro-forma set of financials for operating the facility and the capital investment required to build/renovate and equip a facility.

Financial Summary

It will cost \$17,969 per year to run a seasonal storage facility for 11 tenants (88 pallets), with a capital infrastructure investment of \$19,220. Conservative gross income, based on tenants willingness to pay \$5/pallet per month, came to \$2,200 per year, yielding an annual net operating loss of (\$15,769) per year. In order for the facility to break even it would need to charge \$40.84 per pallet per month.

Detailed Analysis

The idea for a leased storage space would be to serve as a general purpose efficiently operated ‘root cellar.’ The facility would not be climate controlled, or refrigerated, but would be insulated with a fan based ventilation system striving to maintain an average temperature of 32F. The fan would turn on and vent the building anytime the external air temperature is cooler than that inside the building. The building would be useful predominantly from Mid-October through February and geared to house root crop/winter storage vegetables such as carrots, potatoes, beets, turnip, squash, onion, cabbage. According to Pete, “32F degrees and humid works well for most crops.”

Demand

To quantify demand, an internet survey was sent out to the Vermont Vegetable and Berry Growers Association List Serve and to members of the North Country Farmer Cooperative. 15 surveys were completed by farms on the Vermont Vegetable and Berry Growers Association List Serve and three responses were received from NCFC members for a total of 18 responses. Eleven of the eighteen responses, 61%, indicated an interest in leased storage in the Northeast.

Location

Of these, 11 said they were interested in leased storage space and 10 (56%) said they wanted it located somewhere other than the North East Kingdom (Craftsbury, Hardwick, or I-91 near Lyndonville).

Six responses indicated an interest for storage in “Coos County/Lancaster/Colebrook, New Hampshire” and two responses indicated demand in Washington County/Barre, Vermont. Of the three initial options cited:

Craftsbury, Hardwick and I-91 Lyndonville, Craftsbury was not of interest to 11 of 18 respondents, Lyndonville was not of interest to 10 of 18 respondents and Hardwick was the most likely favored with only 7 of 18 respondents indicating they would not travel to it.

Crops

Types of crops growers are looking to store mirrored the crops our study had envisioned and include: Onions, garlic, leeks, potatoes, winter squash, carrots, beets, cabbages, parsnips, rutabaga, radishes, pie pumpkins, brussel sprouts, sweet potatoes, other roots, popcorn, and dried beans.

Space

Of the 18 respondents, six indicated their specific needs. For these six, total pallet space demand came to approximately 50 pallets, which would require 133 square feet, (8 pallets of square footage) if being stored 6 pallets high. It would require 800 square feet if being stored one pallet high.

Space need per grower varied from a minimum of 1-2 pallets to a maximum of 21 pallets. If we assume an average, based on the responses, we would require 8 pallets space per grower.

Based on the initial indication of 11 growers interested in space, total demand could be estimated around 88 pallets (5,632 cubic feet), 1,408 square feet if stored 6 pallets high at 4' per pallet.

Fees & Gross Income

Four respondents answered questions regarding fees and rates. Respondents indicated a willingness to pay ranging from a flat fee of \$50/month to \$5/pallet per month.

If we use the \$50/month flat rate, estimating 11 users, using the service from October through February, (5 months), the gross income would be \$2,750 per year.

If we use the \$5/pallet per month fee, estimating 11 users, 8 pallets each, using the service from October through February, (5 months), the gross income would be \$2,200 per year.

Therefore the average gross income likely, based on either way of formulating the fees, would come to approximately \$2,475 per year.

Cash Flow Projection

Gross Income

Using the most conservative data from the survey, the study projected gross income based on charging a \$5/pallet per month fee. Estimating 11 users, 8 pallets each, using the service from October through February, (5 months), gross income would come to \$2,200 per year.

Operating Expense & Capital Infrastructure

Costs to run a leased storage facility were developed by Annie Rowell, Program Manager, and Sarah Waring, Executive Director of the Vermont Food Venture Center, Pete Johnson, owner, Pete's Greens, Chris Callahan, PE, Agricultural Engineering, UVM Extension, and Rose Wilson. The annual projected cost to run a leased, off-site, dry goods storage facility for approximately 11 tenants came to \$17,969 This included the following assumptions:

- expenses would run 6 months per year even if income was only 5 months of the year.

- A finance manager for billing would be required 4 hrs per week
- A facility manager would be required for sixteen hours per week. The position may require several part time days rather than any full day in order to maximize client access and properly monitor the storage environment.
- Supplies and repairs and maintenance would run just over \$3,200 per year.
- Utilities would average \$1,000 per year
- Internet for remote monitoring would run \$540 for the year
- Insurance would cost \$3,600.
- Capital expenses include build out to retro-fit an existing 7' high, 288' square foot root cellar, providing approximately 2,000 cubic feet of space. Build out costs came to \$54/sq ft. Industry average for commercial/industrial construction is up to \$40/sq ft (<http://www.buildingsguide.com/faq/what-average-commercial-building-cost-square-foot>) however given the project includes refrigeration expense, the study recommend it would be best to err conservatively and continue to use \$54/sq ft as the build out estimate if exploring other potential sites.
- Capital equipment was based on assuming a pallet jack would be used initially, upgrading to a forklift if demand and/or size of the facility warranted it.
- Capital equipment also assumed a remote climate control monitoring system would be put in place.

Net Income & Break Even

Annual net income would yield a minimum shortfall of (\$15,769) per year. In order for the facility to break even it would need to charge \$40.84 per pallet per month.

Courtesy: Vermont Farm Viability Enhancement Program

CASH FLOW PROJECTION

Part time Winter Leased Storage Facility

Annual Cash Flow and Start Up Capital Projection

Cash Receipts	
11 Tenants, 5 mos/yr, 8 pallets each \$5/pallet/month	2200
TOTAL CASH RECEIPTS	\$ 2,200
Cash Expenses	
Variable Expenses:	
Labor	
Financial Manager	\$ 2,268
Facilities Manager	\$ 6,480
Payroll tax	\$ 875
Repairs and Maintenance	\$ 2,995
Supplies	
Shrink wrap	\$ 123
Other supplies	\$ 88
Other	
Total Variable Expenses:	\$ 12,829
Variable Expenses as a % of Gross Income	583%
Fixed Expenses:	
Insurance, farm share	
General Liability	\$ 1,500
Property building or business personal property	\$ 2,100
Property tax	
Utilities	
electric	\$ 1,000
propane/oil	
internet access	\$ 540
Other	
Total Fixed Expenses	\$ 5,140
Fixed Expenses as a % of Gross Income	234%
TOTAL CASH EXPENSES	\$ 17,969
RECEIPTS MINUS EXPENSES	\$ (15,769)
Net Income as a % of Gross Income	-717%
Less CAPITAL EXPENSE	
Build out	
Refrigeration	\$ 4,000
Door	\$ 1,500
Access improvement and entryway	\$ 2,000
Spray foam insulation and sealing of leaky roof	\$ 8,000
Total Build Out	\$ 15,500
Build Out Per Square Foot	\$ 53.82
Equipment- Immediate Needs	
Pallets	\$ 220
Pallet jack (for now)	\$ 300
Vegetable storage crates	\$ 800
Standard refrigeration controls with remote monitoring	\$ 500
Total Immediate Equipment Needs	\$ 1,820
Equipment- Future Needs	
Fork lift (for future)	\$ 1,500
Racking (for future)	\$ 400
Total Future Equipment Needs	\$ 1,900
Total Capital Expense	\$ 19,220

4 hours/week, 6 mos/yr - \$21/hr for billing

16 hours/wk; 6 mos/yr - \$15/hr Monthly inventory count/Client Access/Building Management 10%

20% of budget

\$61.73/box each box comes with 4 rolls, and we generally purchase 2 boxes/year

\$58.80/box each box comes with 36 rolls, and we generally purchase 1.5 boxes/year

\$1 mill liability coverage

\$90/month 6 months

Quote from Pete to retrofit a 7' high, 288' square foot root cellar

Note: Additional expense for site design, permitting may be required.

approx \$20/pallet.

good, used ~\$200-\$300

50 crates \$16/crate

Used \$1000-\$1500

\$200/rack stores 6 pallets top to bottom

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