

Greater Otsego County Hops Feasibility Report



**Prepared for the Greater Oneonta Economic Development Council
(GO-EDC)**

by

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Introduction

This report, completed at the request of the Greater Oneonta Economic Development Council (GO-EDC), provides detailed comment on the economic feasibility of re-establishing thriving hops and craft beverage industries in Otsego and the surrounding counties. It begins in Section I with a discussion of the supply side of the market, focusing on the current level of local hops production and the potential for expansion of local supply. In the supply section, two distinct models for acreage expansion are presented. Section II presents an overview of the demand side of the market with a profile of the current demand for local hops, realistic expectations for expansion of current demand, and incentives for new local entrants in the craft brewery market. The report concludes in Section III with suggestions for moving forward on a concerted hops initiative.

Section I -- Hops Supply

To understand the farmer/supply side of the market, I drew upon phone conversations with Steve Miller of Cornell Cooperative Extension, web-based material from the University of Vermont's hops program and Cornell Cooperative Extension's hops program, a hops feasibility report produced by Rosalie Wilson in 2010, and a survey of local farmers fielded by Dawn Rivers, Hartwick College intern, in summer 2013.

1.a Hops History

By 1880, New York State grew 21 million pounds of hops or 80% of the U.S. hops supply and Otsego County, in particular, accounted for roughly one third of NY State production. However, a mold blight and aphid infestation coupled with wildly fluctuating prices and productivity gains from mechanization on the west coast ended the region's market position (Northeast Hop Alliance 2013). Currently, global hops production stands at 1.9 billion pounds annually (Hops Growers of America 2013), of which the US provides less than a third (31%) and New York provides less than .1%. Looking at it another way, in 2012 all of New York State grew slightly more than 100 acres of hops, while the average commercial farm in Washington State grows 660 acres. Figure 1 details the source of hops supply in New York State as of June 2013.

Nonetheless, New York remains ideally suited geo-physically to support high quality hops production. As indicated in Table 1, much of Otsego and Delaware counties conform perfectly to the growing requirements of the crop. Further, the slow and steady decline of the agriculture (largely dairy) sector in the state has left many acres of productive farmland idle. According to the most recently available data from the U.S. Agricultural Census, Otsego County has nearly 7,500 acres of idle farmland spread among 185 farms while Delaware County has over 1,900 acres spread among 94 farms (NASS 2007). A recent survey of farmers who attended a hops interest meeting provides perhaps a more immediate picture of local supply potential. Of the 19 farmers responding to the survey (46.3% response rate), six have between three and nine acres available for planting and eight have ten or more acres available for hops planting. Sixty percent of these farmers view a revenue stream of \$7,500-\$12,500 per acre to be reasonable, attainable with yields of 1,000 to 1,500 pounds/acre and a wholesale price of \$7 to \$12 per pound (Rivers 2013). If these farmers were to move forward, they would double current NY State hops production. Hops farming has the potential to provide a number of fairly lucrative agriculture jobs.

However, survey results indicate that the start-up costs associated with establishing a hops yard and the capital costs necessary to harvest and process a crop are significant barriers to entry for farmers (Rivers 2013).

1.b Growing Hops

Hops is a perennial crop whose life span is dictated more by market demand than mother nature. As is frequently the case with such crops, this complicates cash flow models by introducing both high fixed start-up costs and a substantial delay between the time of first planting and the production of an established and marketable crop. Specifically, cost estimates for the initial purchase and installation of the hops trellis system and high quality, mold-resistant rhizomes range from \$10,000 to \$15,000 per planted acre. Further, an acre of planted hops will yield 40% in the second year, 90% in the third year, and 100% in the fourth year (Wilson 2010). Farmers intending to grow hops must have an alternative income stream upon which to rely in the initial years as well as access to capital to support significant start-up costs.

Once planted, yield varies substantially depending upon hops variety, soil and climate as well as farmer management of fertilizer, pest control, and pruning. While existing farms are estimated to experience yields of approximately 1,000-1,500 pounds of dry hops per acre, some farms that have implemented management practices similar to those used in the Pacific Northwest have experienced regular yields as high as 1,600-1,800 pounds per acre (Miller 2012; Whipple 2012). Hops are harvested once annually, and harvest timing is an important component of the ultimate quality of the product. Hops harvest times vary with farm micro-climate and hops variety; some harvest timing can also be controlled through crop management and pruning. (Whipple 2012)

Hops varieties are generally categorized as either bittering (those with high alpha acid content) or aroma hops (those with lower alpha acid content), although some bittering hops are used for aromatic purposes as well. In general, New York State is more suited to growing aromatic hops. Further, this category of hops generally earns a premium over the more commoditized bittering hops varieties as it is that which gives different beers their nuanced taste profiles (Wilson, 2010). Currently, a number of varieties are grown in New York State, including Centennial, Mt. Hood, Zeus, Cascade and Nugget.

1.c Processing Hops

To obtain the usable cone portion of the plants, hops are cut from the trellis (often manually) and then feed into a harvester which separates the cone from the other plant matter. The cones are then sifted and (ideally) air dried¹ on large mesh oasts until they reach the desired moisture content (usually 8 hours). Some drying is accomplished using low levels of heat as well as circulating air, but the heat destroys some of the oils resident in the product. Ideally, dried hops are immediately converted to a powdered and pelletized (again, under minimal heat scenarios) form for easy cold storage in vacuum-sealed foil pouches. Baled, dried hops may be cold stored for periods of no more than 1-3 months,

¹ Some hops can be sold to brewers in wet or dried whole leaf form, although there is likely a more limited market for this type of product.

although storage does compromise the essential oils contained in the cones and therefore affects the quality of the final product. The drying and, to a lesser degree, the pelletizing processes are instrumental to the creation of a high quality hops product (Whipple 2012). Furthermore, laboratory certification of alpha and beta acid content as well as moisture and oil content are necessary if the product is to be sold to a commercial brewer. This testing may be outsourced to a lab, perhaps one to be located at Hartwick College or SUNY Cobleskill.

As with the high start-up costs associated with establishment of a hops crop, processing requires capital infrastructure in the form of harvesters, sorters, drying oasts, pelletizers, vacuum packaging equipment, and cold storage. Small stationary used Wolf harvesters are a common choice for mid-size New York farms (5-10 acres). Currently, four such machines are in use in New York State, and an expert from Cornell Cooperative Extension estimates that such a machine could handle 20 acres of hops spread across farms within an hour driving distance of the machine (Miller 2012). Estimates of the cost of a used Wolf machine capable of harvesting 1.5 acres of hops per day are \$35,000 (including shipping and retro-fitting). Mobile harvesters that can be towed behind a truck from farm to farm recently have been prototyped at the University of Vermont to provide smaller farms with options for easier shared use. Estimates of the cost of such a mobile harvester, capable of harvesting an acre of hops per day, are unclear as existing models are self-constructed following plans available online.² Growing interest in such harvesters is likely to generate commercial production of the mobile harvesters at competitive prices in the very near future (Steanland, 2013). Note that smaller harvesters are currently commercially available for roughly \$14,000 each from Bine Implement, but these are stationary and capable of harvesting a maximum of only 1/3 acre per day. As such, they may not be the most cost effective option for shared use or for any but the smallest farms.

The technology behind the construction of drying oasts is simple, and these can be constructed easily by a farmer using a commercial grade floor fan and common construction material. However, oasts require both a great deal of space and an adequate power source, and the quality of the constructed oast does much to determine the quality of the finished product. Generally, a 20'X12' oast is appropriate for drying 600-800 pounds of hops over the course of 8 hours and will cost roughly \$2,000. Drying can take place on farm at the harvest site or in a more centralized location. Once dried and compressed, hops can be stored for a period of time before pelletizing. However, drying should not occur far from the pelletizing site unless adequate cold storage is available.

Pelletizing equipment is also fairly inexpensive, although models capable of processing larger volumes without overheating are more costly. A small hammer mill and pelletizer capable of processing 500-1,000 pounds per day is available for less than \$5,000. Larger machinery capable of processing 300 pounds per hour at lower temperature levels (producing higher quality hops) can cost \$30,000-\$55,000.

Large mechanized food grade nitrogen flushing, vacuum sealing machines are available for approximately \$25,000. Smaller (manual) machines with nitrogen flushing cost \$2,000-3,000. Both of these machines produce the industry standard packaging. Smaller home use food grade vacuum

² Current production cost estimates for self-production are roughly \$35,000-\$50,000.

systems without nitrogen flushing are available for \$200, but these may limit the market potential of the product.

Once vacuum sealed, the pelletized hops product can be stored in a standard chest freezer until sold. Such freezers are available for \$1,000-\$2,000.

1.d Two Models of Local Hops Production

Cooperative Hops Hubs

Given the relative scarcity of hops acreage in Otsego and Delaware counties currently, any proposed expansion of the supply side of the market is really a “starting from scratch” effort. As such, it is unlikely that the area will see significant acreage under productive cultivation for a number of years. The cooperative hops hub model takes an incremental approach to market expansion that matches infrastructure investment to acreage and grows productive capacity slowly. The fundamental premise of this model is that a limited number (6) of committed and geographically co-located farmers can work together to scale up idle land for hops plantings of a single acre in the first two years, two acres in the third and fourth years, and five acres in the fifth year, with the possibility of an additional five acres in the seventh year. During this period, the farms would cooperatively purchase the equipment necessary to process, on a shared basis, their product for commercial sale. With 5 acres per farm, each hub would have 30 acres of hops under cultivation within 5 years, or nearly 1/3 of the total state hops currently under cultivation. If farms opted to continue to 10 acres, the acreage would exceed half of the current state cultivation.

Appendix A provides an accounting of the rough year by year income and expense projections assuming a conservative yield of 1,250 pounds per acre and a modest sale price of \$10 per pound. Once all of the equipment has been paid for, farmers of 5 acres can expect annual net income of approximately \$48,000.³ The annualized internal rate of return on the 11 year cash flow during the payoff period is 5.9%. With this model, each farm has the ability to maintain the integrity of its own product and establish label-value from reputation and terroir.

While this model has the benefit of 1) limiting farmers’ risk by sharing fixed costs and engaging in incremental growth over time that maximizes learning and minimizes loss due to human error, and 2) allowing farmers to maintain the individual identity of their hops, it is not without downsides. First, because the investments are scaled to acreage, processing efficiency is likely to be compromised once full acreage is established. Specifically, this model assumes the purchase of smaller pelletizing equipment and manual nitrogen flushed packaging equipment that increases processing time once scale is achieved. Further, this model requires a high degree of cooperation among farmers in terms of varietal planting and harvest timing. Finally, because this process yields small batches of output at the individual farm level, brewer demand may be less favorable. One large local brewer indicated that breweries prefer to purchase a large volume of hops from a single source and then use this product over

³ This assumes that the bulk of the labor is provided by one FTE farmer operating full time during the growing and harvesting seasons. Additional labor per acre hired at \$10 per hour for 100 hours is included in the estimates.

an extended period rather than purchase small batches that are likely to vary in composition (Britton 2013).

Decentralized Hops Growing and Centralized Production

To maximize the efficiency of processing and marketing hops once scale has been achieved, an alternative model to the one presented above involves decentralized farmer acreage and harvesting (using shared or centrally owned and rented hops processors) followed by centralized drying, pelletizing, packaging, storage and marketing/sale. Within this model, options exist for a cooperative model, following that of the dairy industry, where farmers accept less per pound of their harvested crop in return for profit sharing on the proceeds from the sale of the finished product. Alternatively, the processing entity may purchase wet hops from farmers at a premium over the cooperative model and then become the residual claimant for any profit earned from the sale of the finished product. The rough projections of revenues and expenses with this model, provided in Appendix B, assume the latter, but the economics of the two variants are similar. In those projections, hops is purchased from the farmer at \$7 per pound and then sold on the market at \$10 per pound. Yields are assumed to be 1,250 pounds per acre, identical to that of the “hub” model. Capital expenditures in the centralized model include both a large pelletizer and a large mechanized nitrogen-flushed vacuum sealing system excluded from the cooperative model.

In this model, farmers transport freshly harvested hops cones to a central location at a pre-scheduled time. The hops are dried at the facility. The product is then tested⁴ and pelletized, either as a single specialty batch (with the farmer’s label) or blended with other product of the same variety and sold under a common label. In this manner, large quantities of hops may be processed using a uniform system that guarantees product consistency and volume, two of the primary concerns cited by brewers when purchasing hops locally.

While the plans for such a facility are preliminary, minimum requirements include adequate ventilated space, ideally with room for expansion. With 25 acres under cultivation, 5- 12’ by 20’ oasts would be needed to dry all of the product within a 10 day period. The drying space alone would consume 1,200 to 1,500 square feet. At 100 acres, the drying space needed would increase to 5,000 square feet. Each oast would run a commercial grade fan continuously, requiring access to 3-phase electric power. In addition, the facility would have to house at least one pelletizing machine. Finally, square footage for office and meeting space would be required.

Personnel costs, like square footage, would increase with acreage. An estimated minimum level of staffing, adequate to process up to 25 acres, would consist of one full time skilled hops processor to operate the machinery and oversee all aspects of hops drying and pelletizing. An additional part-time support person would oversee scheduling and administrative tasks. Because processing occurs once per season, full staffing would be needed for only one to two months per year, although given enough

⁴ Testing personnel are not included in the cost figures. Initially, testing might be conducted in conjunction with Hartwick College’s Chemistry or Biology departments on a fee- for-service basis.

volume, part or full time administrative support might be warranted to manage year round storage and shipping.

A benefit to this model is that it allows for virtually unlimited expansion as it exploits economies of scale in production and leverages Oneonta's central location and access to rail and highway transit. Further, if sited in River Corporation, it utilizes underutilized/vacant industrial space and provides a strong anchor for infrastructure investment and the establishment of new related industries (barley malting, commercial brewing) through economies of scope.

Note, however, that in this model, break-even is attained at 25-30 acres of hops – a number that far exceeds current acreage, and significant profitability is attained only at much larger acreage (>100 acres). In the short term, it might be possible to process non-local hops obtained via rail or road access. Further, given the more expensive equipment purchase associated with this model (i.e., a larger pelletizer and nitrogen flushed vacuum sealing system), farmer profitability is lower under this system.

Section II – Hops Demand

The profitability of hops farming rests in large part on adequate demand for New York State grown hops by the craft brewing industry. This section documents growth in the industry at the national level, details the nature of NY brewer demand currently, and explores the potential for a redirection of that demand towards local suppliers.

II.a The Craft Brewing Industry

The US craft beer industry has maintained significant positive growth even during the most recent recession. Specifically, the industry experienced 15% growth in volume and 17% growth in revenue in 2012, an increase over the previous year's impressive 13% and 15% growth in volume and revenue, respectively. While 409 new craft breweries opened in 2012, bringing the number in operation to just under 2,500, only 43 breweries closed in that year (Brewers Association 2013).

In New York State, over 100 craft breweries are in operation currently. Figure 2 maps the location of these breweries, which tend to locate near urban population centers or high volume tourist locations (e.g., The Finger Lakes Region). Otsego and the surrounding counties are home to five established craft breweries, Matt's Brewery in Utica, Ommegang Brewery, Cooperstown Brewing Company, and Council Rock Brewery in Cooperstown, and Butternut's Brewery, currently located in Butternuts. A new brewery is planning to open on Main Street in Oneonta in the near future under the New York Farm Brewery Law (to be discussed later in the document).

II.b Understanding Current Demand

To better understand the demand for local hops, we fielded a web survey to 86 NY State craft brewers (24.4% response rate) and contacted one large local craft brewers for more extensive conversations. Survey respondents came from all regions of the state and represented a variety of brewery sizes as indicated in Table 2. The survey respondents in total consume nearly 51,000 pounds of more than two dozen hops varieties annually (see Table 3 for the varietal breakdown), the vast majority of which is

currently serviced in part or completely by the Pacific Northwest and, to a lesser degree, by imported hops. The six respondents currently purchasing hops locally consume a total of 3,500 pounds of hops from all sources, although for all but one of these brewers, the local purchase supplements hops purchased elsewhere. Breweries purchasing locally generally buy all of their product from a single farm, with at least some of the product coming in pelletized form, although dried and, to a lesser degree wet whole hops does appear to have a smaller but viable market.

II.b Redirecting Demand towards NY Hops

While few brewers source a significant share of hops from NY growers currently, survey results indicate that a majority would be willing to do so at a price adequate to ensure farmer profitability – in the range of \$8.00-\$12.00 per pound. Specifically, all but one respondent indicated a willingness to purchase 20% or more of their hops in-state, with 10 respondents willing to source 100% locally if the product met their quality and packaging specifications. This amounts to stated demand of approximately 20,000 lbs. among the brewers responding to the survey with about half coming from small conversion of large purchasers and half coming from nearly full conversion of smaller purchasers. If this is a representative sample, aggregate unmet state demand for NY hops may be at or near 100,000 pounds annually.

In order to purchase locally, all of the respondents would want to receive at least some of the product in pelletized form, preferably packaged in nitrogen-flushed vacuum packed containers. Eight of the eighteen respondents willing to purchase locally would take a limited volume of dry whole hops, and six would take a limited volume of wet hops. All but two would want the product lab tested and certified for alpha and beta acids and oil and moisture content. Brewers consistently (>70%) identified volume, variety, consistency of quality, and packaging/pelletizing/testing as current barriers to purchasing locally. Price was stated as a barrier by only 7 of the 19 respondents.

Many note the role of the 2012 NY State Farm Brewery Law in prompting enhanced demand among small existing brewers and new start-up operations. Specifically, to operate under the law, a brewery must source 20% of their hops from New York through 2018, 60% through 2023, and 90% thereafter. Conversations with state authorities confirm the likely entry of at least 13 new farm breweries across the state, adding to the demand noted above (Filler 2013). While the law is also prompting some existing small brewers (5/19) to increase local purchasing according to the survey, most state a concern for local economic conditions (94%), relationships with local farmers (78%) and/or marketing appeal (78%) as drivers for prompting increased local purchasing.

Section III -- Moving Forward

Investigation of the potential for profitable local hops production indicates that a concerted hops initiative merits attention. Otsego and the surrounding counties have a great deal of idle land suited for agriculture. Given appropriate growing conditions and land management, hops production appears to have the potential to provide sustainable farm net income in the range of \$6,000 to over \$9,000 per acre (depending upon the processing model) once initial start-up expenses have been covered. It also has the potential to provide a limited number of related job opportunities in hops processing, marketing and sales. Finally, as hops acreage under cultivation increases in the region, entrepreneurial spin-off

opportunities associated with equipment production, rhizome cultivation, barley malting⁵, and craft beer production are possible.

While NY and Otsego County in particular has a significant history with hops production, little hops is grown here currently. A substantial number of individuals with idle land who have expressed an interest in growing hops commercially cite both start-up costs and hops-specific technical knowledge as barriers to their entry. To address the latter, the Oneonta-based Center for Agricultural Development and Entrepreneurship (CADE), likely in conjunction with The Northeast Hops Alliance (NeHA)⁶, will begin working with local landowners and farmers to build hops producer capacity. In particular, they are planning a “Hop on Board” workshop for Winter, 2014, to kick-start their own hops program. Additional resources are available to farmers at the NeHA website.

I recommend that GO-EDC work with CADE and NeHA to support the development of a critical mass of 5-10 knowledgeable hops farmers able to provide a significantly large and consistent volume of high quality local hops to meet growing demand. This core group of farmers would provide concrete evidence to other farmers on the profitability of hops production. They would also build brewer confidence in local production. Comments from the brewer survey indicate that the local area must prove its commitment to hops production before local purchasing will replace current practices of west coast or international hops sourcing. Farmers who have expressed at least a preliminary interest in participating in the initial core group are listed in Appendix C.

In order to initiate hops production among this core group following either the cooperative hops hub or decentralized processing models, funding is necessary to partially support farmer establishment of hops trellises and farmer purchase of hops harvesters. Additional funding to offset some of the costs of establishing a single centralized drying and processing facility or smaller on-site shared processing facilities is required. Existing funding options are listed at the end of this report, in Appendix D. In addition to these funding sources, a CFA application directly targeted towards hops production should be considered for the 2014 application cycle. CADE has expressed a willingness to participate in such a collaborative CFA proposal. Further, additional tax incentives for the centralized processing model might be sought via the “Start-Up NY” program. Finally, given the potential for profit, private

⁵ Barley malting is another area of potential agricultural growth for the local area. Currently, large malters dominate the industry both in New York State and across the country. However, a number of new craft players are emerging in New York and New England, including Farmhouse Malt in Newark Vally, New York Craft Malt in Western NY, and Valley Malt in Hadley, MA. From the production standpoint, barley is preferable to hops in many ways. It requires no special trellising, it can be grown and harvested twice annually, and it is a common cover crop used by farmers. However, a substantial downside is that unlike hops, the bulk of barley used in beer brewing is grown as a commodity crop, thereby limiting substantially the sale price of the finished agricultural product. Demand for specialty malts should be explored as a complement to hops production and processing. (http://ambainc.org/media/AMBA_PDFs/About/AMBA_Overview.pdf)

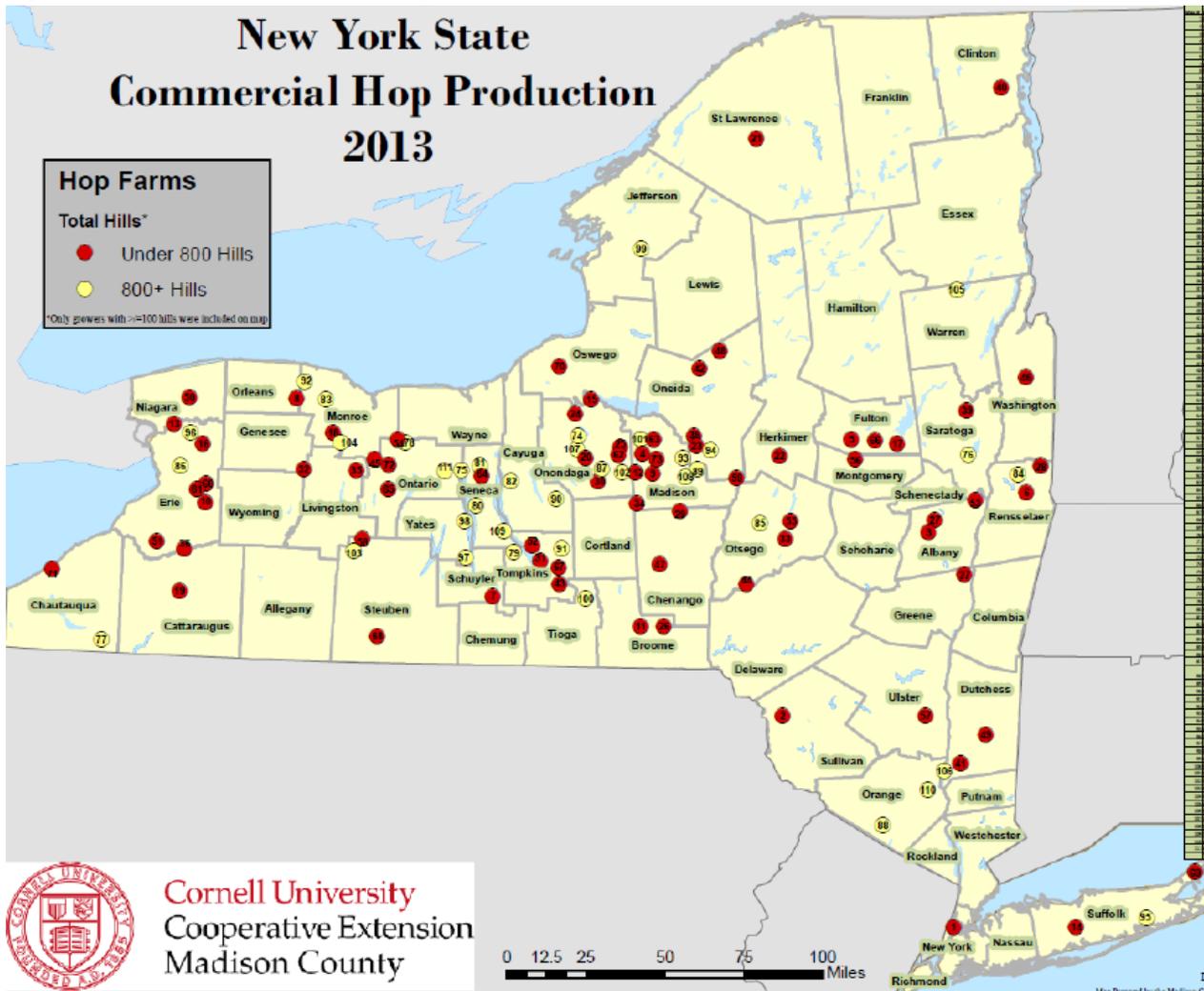
⁶ NeHA runs a series of hops workshops throughout the year across the state. They also provide substantial free and fee-based resources via their website: <http://nehopalliance.org>.

investment dollars should be sought, either through traditional channels or through on-line options such as slowmoney.org

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Figure 1: Current New York State Hops Production



Source: Cornell Cooperative Extension, as published in Northeast Hops News (June, 2013)

Figure 2: Current New York State Craft Beer Production



Source: NY Craft Brewers Association

Table 1: Geo-physical suitability of local region for hops production.

Condition	Requirement	Local Conditions
Latitude	35° N-55° N	42.6175° N
Temperature April-September	10-19° C	14° C
Average Precipitation April-September	64-569 mm	96 mm
Average daylight April-September	10-19 hours per day	14 hours per day
Soil Type	Well-drained, sandy loam	Channery silt loam
Soil Depth	Average 3-4 feet top soil before hitting bedrock	Very deep or moderately deep

Table 2: Survey respondents by region and size (number of barrels brewed annually).

Region	Breweries	Annual Barrels Brewed (range)	Annual Barrels Brewed (average)*	Annual Barrels Brewed (total)
Long Island	6	1,200-1,500	1,350	2,700
Hudson Valley	5	100-8,000	4,050	8,100
Capital Region	7	12-1,000	564	3,382
North Country	1	N/A	N/A	N/A
Southern Tier	6	300-800	467	1,400
Mohawk Valley	1	245	245	245
Central New York	1	1,100	1,100	1,100
Finger Lakes	3	600-1,000,000	500,300	1,000,600
Western New York	2	2,450-60,000	31,225	62,450

* Due to some incomplete surveys, calculations of averages do not necessarily reflect numbers of survey respondent breweries.

Table 3: Types and amounts of hops varieties used by survey respondents (in pounds).

Variety	Average	Total	Responses
Hallertau	780.92	9,371	12
Centennial	134.13	2,012	15
Golding	657.91	7,237	11
Willamette	935.38	7,483	8
Tettnang	244.13	1,953	8
Perle	118.50	474	4
Saaz	288.10	2881	10
Magnum	261.57	1,831	7
Nugget	179.43	1,256	7
Northern Brewer	185.57	1,299	7
Columbus	994.40	14,916	15
Glacier	125.00	250	2

Appendix A: Rough Cash Flow Projections for the Cooperative Hops Hub Model

See attached spreadsheet Appendix A

Appendix B: Rough Cash Flow Projections for the Centralized Processing Model

See attached spreadsheets Appendix B1 and Appendix B2

Appendix C: Potential Program Participants

The following farmers are potential candidates for participating in the initial core group of hops growers:

- Betsey and Bryan Babcock
Handsome Brook Farm
4132 E. Handsome Brook Road, Franklin, NY 13775
(607) 829-2548
- Jared Wood
Muddy River Hops
(607) 287-8770, jared@muddyriverhops.com
- Seth Haight
haights@springbrookny.org
- Nancy Hayen/Michael Duheme
nhayen@oecblue.com
duhemem@stny.rr.com

In addition, the following potential processor has indicated preliminary interest in the project:

- Whipple Brothers Farm
Chris Whipple
(585) 260-0351
Chris.a.w81@gmail.com
- Justin Whipple
(585) 943-9649
Justin.whipple@gmail.com

Appendix D: Grant and Financing Agency Resources

FEDERAL PROGRAMS

SBA Microloan Intermediaries:

Accion USA
115 East 23rd Street, 7th Floor
New York, NY 10010
Senior Director: Erika Eurkus
Microlending: Melissa Roberts
Phone: 617-616-1559
Email: mroyles@accionusa.org

This is the only SBA microlender that serves the tri-county area.

USDA Farm Service Agency lending:

New York State Farm Service Agency
441 S Salina St.
Syracuse, NY 13202-2450
James Barber
State Executive Director
(315) 477-6303
(315) 477-6324 fax
James.Barber@ny.usda.gov

Chenango County Farm Service Agency
99 N Broad St.
Norwich, NY 13815-1387
Brian Sheridan
County Executive Director
(607) 334-3231
(607) 336-2918 fax
brian.sheridan@ny.usda.gov

Delaware County Farm Service Agency
44 West Street

Walton, NY 13856-1041

Barbara Davidowsky
County Executive Director
(607) 865-4005
(607) 865-7465 fax
barbara.davidowsky@ny.usda.gov

Otsego County Farm Service Agency
967 Co Hwy 33
Cooperstown, NY 13326-9222
Mary Ann Snider
County Executive Director
(607) 547-8131
(607) 547-8814 fax
Maryann.Snider@ny.usda.gov

These are the individuals one would contact for USDA Farm Operating Loans, Microloans
(<http://www.fsa.usda.gov/FSA/webapp?area=home&subject=fmlp&topic=dflop>)

USDA Rural Development grants and loans:

The USDA has a number of programs where an organization (such as GO-EDC) can get money to fund rural development projects in various ways. The Intermediary Relending Program is for outfits that want to become a lending intermediary (like a microloan intermediary) by borrowing money from the USDA to capitalize a loan fund. Interested organizations should contact the state FSA office.

Intermediary Relending Program: http://www.rurdev.usda.gov/BCP_irp.html

There is also a grant program for local government entities, development non-profit NGOs, etc., to fund development projects like: Acquisition or development of land, easements, or rights of way; construction, conversion, renovation, of buildings, plants, machinery, equipment, access streets and roads, parking areas, utilities; pollution control and abatement; capitalization of revolving loan funds including funds that will make loans for startups and working capital; training and technical assistance; distance adult learning for job training and advancement; rural transportation improvement; and project planning.

Rural Business Enterprise Grant Program: http://www.rurdev.usda.gov/BCP_rbeg.html

NEW YORK STATE PROGRAMS

Empire State Development: Small Business Revolving Loan Fund

Adirondack Economic Development Corporation (Mohawk Valley)
300 67 Main St, Saranac Lake, NY 12983
(518) 891-5523

Alternatives Federal Credit Union (Southern Tier)
125 North Fulton Street, Ithaca, NY 14850
(607) 273-4611

Community Loan Fund of the Capital Region, Inc. (Mohawk Valley)
255 Orange St., Albany, NY 12210
(518) 436-8586

New York Business Development Corporation (all NY regions)
235 Harrison Street, Syracuse, NY 13202
315-453-8195

New York Business Development Corporation Local Development Corporation (all NY regions)
235 Harrison Street, Syracuse, NY 13202
315-453-8195

REDEC Relending Corporation (Southern Tier)
8 Denison Parkway, E., 3rd Floor—Suite 403, Corning, NY 14830
607-962-3021

These programs operate in a manner similar to the SBA Microloan progra. Listed above are the intermediaries serving either the Southern Tier or Mohawk Valley. Empire State Development also has a comprehensive list of business incentives available to firms in the state, many of which are available to farmers. That list can be found at <http://esd.ny.gov/NYSBeverageBiz/permitsIncentives.html>.

Department of Agriculture and Markets

Surprisingly, Ag & Markets has little in the way of state-specific funding opportunities for farmers or agribusiness concerns, except for the Specialty Crop Block Grant program (for which they get funding from the USDA). The most recent RFP for that program is at <http://www.agriculture.ny.gov/RFPS.html>.

Start-Up NY

This fund provides substantial tax incentives for new businesses aligned with the operating principles of a participating college or University. Details on the program are available at <http://www.governor.ny.gov/2013-startupny/startupny>.

LOCAL PROGRAMS

Development Chenango Corporation

15 South Broad Street, Norwich, NY 13815

Jennifer Tavares, (607) 334-553

jtavares@chenangony.org

Business Assistance Loan Fund, Microenterprise Revolving Loan Fund. Serves only Chenango County.

Delaware County Department of Economic Development

One Courthouse Square, Delhi, NY 13753

Bill Willis, Economic Development Specialist, (607) 746-8595

info@dcecodev.com

Microenterprise Loan Fund, RBEG Loan Fund (USDA), IRP Loan Fund (USDA), Economic Development and IDA Loan Funds, all for mostly small or microloans for business start-ups and for expanding existing businesses. Serves only Delaware County.

Mohawk Valley Economic Development District

26 West Main Street, Mohawk, NY 13407

Steve Smith or Greg Eisenhut, (315) 866-4671

gregmved@twcny.rr.com

Mohawk Valley Rehabilitation Corporation (MORECO revolving loans for real estate, equipment, and/or working capital financing. Serves Herkimer, Otsego, Oneida, Schoharie, Montgomery and Fulton Counties.

Otsego County Economic Development Department

242 Main Street, Oneonta, NY 13820

Carolyn Lewis, (607) 432-8871

lewisc@otsegocounty.com

County IDA, County Revolving Loan Fund, Microenterprise Loan, OCDC Revolving Loan funds for lending to local business concerns. The web site does not mention farms or agribusinesses as eligible for loans, although Tourism/Destination businesses are listed (a stretch but possible). Serves Otsego County.

OTHER NON-GOVERNMENTAL FUNDING AGENCIES

North East Sustainable Agriculture Research & Education (NESARE)

655 Spear Street
University of Vermont
Burlington, VT 05405-0107
(802) 656-0471

The NESARE has three types of grants that might work for one or the other models outlined in this report. They have grants for individual farmers who want to test a new idea, agricultural services providers (including government agencies and local non-profits) that want to conduct demonstration projects, research or marketing projects with farmers as cooperatives, and community organizations that want to make direct connections between community revitalization and farming. Further information can be found here: <http://www.nesare.org/Grants/Get-a-Grant>

Appalachian Regional Commission (ARC)

Southern Tier East Regional Planning Development Board
Erik Miller, Director
www.steny.org
607.724.1327 x212
607.267.9323 mobile

NY State Program Manager
Kyle Wilber
New York State Department of State
Division of Local Government
1 Commerce Plaza, Suite 1015
99 Washington Avenue
Albany, NY 12231
518.473.3355

According to the ARC web site, "Program grants are awarded to state and local agencies and governmental entities (such as economic development authorities), local governing boards (such as county councils), and nonprofit organizations (such as schools and organizations that build low-cost housing)." (<http://www.arc.gov/grants>) The ARC has a loan fund capitalization grant program, but does not make grants or loans to individuals.

Appendix E: Additional Resources

Hops Supply Information

- Cornell Cooperative Extension (Steve Miller)
315-684-3001 or Hops.Educator@gmail.com
- EU hops production data
<http://ec.europa.eu/agriculture/markets/hops/>
- Gorst Valley Growers
http://www.gorstvalleyhops.com/charter_grower.php
- Mobile hops harvester design plans
<http://www.callahan.eng.pro/blog/index.php/2011/08/25/mobile-hops-picker/>
- Mobile hops harvester production
Steve Steanland (607-326-7707)
- Northeast Hops Alliance
<http://nehopalliance.org/>
- NY hops newspaper articles
<http://innovationtrail.org/post/once-dominant-grower-new-york-rediscovering-hops>
<http://www.craftbrewingbusiness.com/ingredients-supplies/hops-growing-gone-wild-farming-opportunities-have-a-cost/>
<http://lancasterfarming.com/news/northeedition/-2012-12-06T11-19-55#.Ubit7ueKKS0> (law)
- University of Vermont hops project
<http://www.uvm.edu/extension/cropsoil/hops#vthops>
<http://www.uvm.edu/extension/cropsoil/hops>

New York Hops Farms

- Foothill Hops
<http://www.foothillhops.com/>
- Muddy River Hops (Jared Wood)
<http://www.muddyriverhops.com/>
(607) 287-8770 or jared@muddyriverhops.com
- Pedersen Farms (Rick and Laura Pedersen)
<http://pedersenfarms.com/>
(315) 781-0482
- Pompey Mountain Hop Farm (Tim Manchego)
(<http://www.pmihops.com/>)

Malting

- Farmhouse Malts in Newark Valley (Emily Matrazzo)
<http://www.farmhousemalt.com/themalthouse.html>
607-227-0638

- General Malting Information
http://www.nytimes.com/2012/06/13/dining/small-malting-companies-revive-a-dormant-craft.html?pagewanted=all&_r=0
<http://www.newyorkcraftmalt.com/press.html>
<http://valleymalt.com/history/>

Hops Demand Information

- NY Craft Brewers Association list of craft breweries (David Katleski)
<http://www.thinknydrinkny.com/breweries.php>
- Production Levels of Craft Breweries
<http://www.brewersassociation.org/pages/media/press-releases/show?title=brewers-association-releases-top-50-breweries-of-2012>
<http://www.foxbusiness.com/industries/2013/05/24/top-10-us-craft-breweries-by-sales-volume/>
<http://blogs.denverpost.com/beer/2013/04/10/craft-beer-sales-2012/9403/>
- Oneonta HOPS brew club (Josh Hammonds)
<http://hopsbrewclub.wordpress.com/about/>
- George M. Allen, President Northern Eagle Beverages, Inc.
 607-432-0400 or nebgma@stny.rr.com