

*Vermont Sustainable Agriculture Council
2009 Annual Report and Recommendations*



Photo by Rachel Gilker

Compiled by UVM Center for Sustainable Agriculture

106 High Point Center, Colchester, Vermont 05446

www.uvm.edu/sustainableagriculture

TABLE OF CONTENTS

I. Introduction	1
II. Recommendations	2
Strengthen Vermont’s Local Food System	2
Enhance On-Farm Energy Alternatives	2
III. Research Summaries	3
Understanding Vermont’s Local Food Landscape	3
Mapping Vermont’s Local Food System	11
Sustainable Food Sourcing and Distribution in the Vermont- Regional Food System	20
Farm Energy Innovation in Vermont	23
Developing Standards for Sustainable Biofuels in Vermont	25
A Feasibility Study of a Mobile Unit for Processing Oilseed Crops and Producing Biodiesel in Vermont	29
IV. Other Developments in Sustainable Agriculture	33
Cabot Sustainability Initiatives	33
Vermont Fresh Network	33
Vermont Sustainable Jobs Fund.....	34
Vermont Technical College	35
Vital Communities	35
RAFFL	36
Green Mountain College.....	36
Agency of Agriculture	36
UVM Center for Sustainable Agriculture	37
Northeast SARE 2008.....	37
Vermont Farm Viability Enhancement Program	38
Food System Research Collaborative	39
V. Background on the Council	
6 V.S.A. Chapter 209, Sustainable Agriculture Section 4701	40
2007 Memorandum of Understanding	42
2009 Vermont Sustainable Agriculture Council Members	45

Vermont Sustainable Agriculture Council Report

I. Introduction

The purpose of the Council is to identify needs, set goals, select priorities and make annual recommendations regarding sustainable agriculture research, demonstration, education and financing. An annual report containing recommendations is required to be submitted to the Vermont Legislature, the University of Vermont and Council members. Created by Statute 6 V.S.A. Chapter 209, Sustainable Agriculture Section 4701 in 1994, the Council's role is further clarified in a 2007 Memorandum of Understanding (MOU) between University of Vermont (UVM) and Vermont's Agency of Agriculture, Food and Markets. This MOU contains an agreement to provide the Council with annual financial support for its activities, and authorizes the Council to seek funding support to act on its recommendations for research.

The Council is funded by the

- Vermont Agency of Agriculture; and
- UVM Robert P. Davison Memorial Endowment, Center for Sustainable Agriculture, Extension and the College of Agriculture and Life Sciences.

II. Priority Recommendations

1. Strengthen Vermont's Local Food System

1.1 Address gaps in food system infrastructure by supporting multi-farm distribution, processing and storage initiatives, for example, through regional food hubs.

1.2 Create a unified vision, policy platform, and action plan to develop and coordinate Vermont's food system, including metrics for success. Organize summit to build broad-base support. Support coordination of information and funding to build collaboration.

1.3 Identify new methods for increasing access to local foods for Vermonters of all income levels while still providing farmers with a fair price. Continue support for existing programs that increase access to local foods for Vermonters of all income levels, such as Farm-to-Family Coupons, Farm Shares, and Farm-to-School programs.

2. Enhance on-Farm Energy Alternatives

2.1 Accelerate farm energy development through strategic support for innovation.

Vermont's most active energy production sub-sectors (biodiesel and methane digesters) have nearly all components of innovation in place. The following support components would help develop new or emerging sub-sectors such as solar, wind, biomass and hydro. Ideas and concepts about products, processes, services and systems

- Learning opportunities including study tours and discussion groups
- Proto-types, pilot and demonstration projects
- Feasibility studies and strategic analyses
- Communication and outreach
- Public and private financing
- Technical assistance, "circuit riders" and consultants
- Professional associations and peer networks
- Mature technologies from local and non-local vendors

2.2 Increase information exchange and support for innovation in production of renewable energy through peer learning among farmers, access to accurate information, demonstration hubs, handbooks, knowledge of development in other energy subsectors and publically provided on-farm technical assistance

2.3 Draft an implementation strategy or "road map" for adopting standards for sustainable biodiesel production and use in Vermont. This could include third-party certification, such as the program being developed nationally by the Sustainable Biodiesel Alliance, which has received ongoing input from the Vermont Sustainable Jobs Fund.

III. Research Summaries

Highlights of council research in 2008 related to local food and on-farm energy follow. Full reports and recommendations are available at <http://www.uvm.edu/~susagctr/?Page=sacarchives.html>. Vermont's leadership in local, sustainably produced food and on-farm energy has been exemplary. In the last five years, these sectors have seen tremendous growth and innovation in the state. Nonprofit work, state and university support, private entrepreneurship, public grants and funds from many small local foundations have enabled these changes. These efforts are contributing to the increased vibrancy of Vermont's rural economy and making a difference in Vermont's capacity to be more food and energy independent.

The research below provides an in-depth look at the local food and energy sectors today and where future support is needed to best address Vermont's challenges and opportunities.

1. Understanding Vermont's Local Food Landscape: An Inventory and Assessment of Recent Local Food Initiatives

Virginia Nickerson P.O. Box 244, Shoreham, VT 05770

The last five years have seen an explosion of initiatives in Vermont's public and non-profit sectors to promote the production, distribution and consumption of locally or Vermont-produced foods. Yet interest in local food has grown so quickly that there is the risk that diverse groups are undertaking similar activities without coordination and knowledge of what others are doing.

This study was conducted to provide an overview of existing and planned recent local foods initiatives in the state. Since other studies have addressed the perceptions of producers, processors and distributors, this study focuses on public, non-profit and grassroots efforts, as opposed to private and for-profit efforts.

The study addressed the following questions:

1. Who are the actors in the local foods landscape?
 - What is motivating their efforts?
 - What are their relationships with one another?
 - Is there a need for increased collaboration, communication and coordination, and if so, what may be done to facilitate it?
2. What are the gaps in the local food system and the challenges to increasing the production and consumption of local foods?
3. What are the opportunities or leverage points for increasing the production and consumption of local foods?

Results

The rapid growth of interest in local foods in the last few years is driven by: 1) consumer interests in food health and safety and in lessening the environmental impacts of a centralized food system; 2) high fuel prices; and 3) a shared commitment among Vermonters to maintain a working landscape and utilize agriculture as a sustainable economic development strategy.

Communication and collaboration currently vary a great deal depending on the level of operation. The study organized stakeholders by whether they work at the statewide level, at a regional level or

at a local/community level. In general, groups at the state, regional and community levels are aware of the local foods work of the statewide organizations. The regional and local groups frequently turn to the statewide groups for advice, support or to co-sponsor projects. The organizations cited most frequently by the various respondents at all levels as touch points for collaboration were:

- | | |
|---|---|
| -NOFA VT | -Vital Communities |
| -VT F.E.E.D | -Rural Vermont |
| -Center for Sustainable Agriculture/
UVM Extension | -Foodworks at Two Rivers |
| -The Intervale Center | -Shelburne Farms |
| | -Agency of Agriculture Food and Markets |

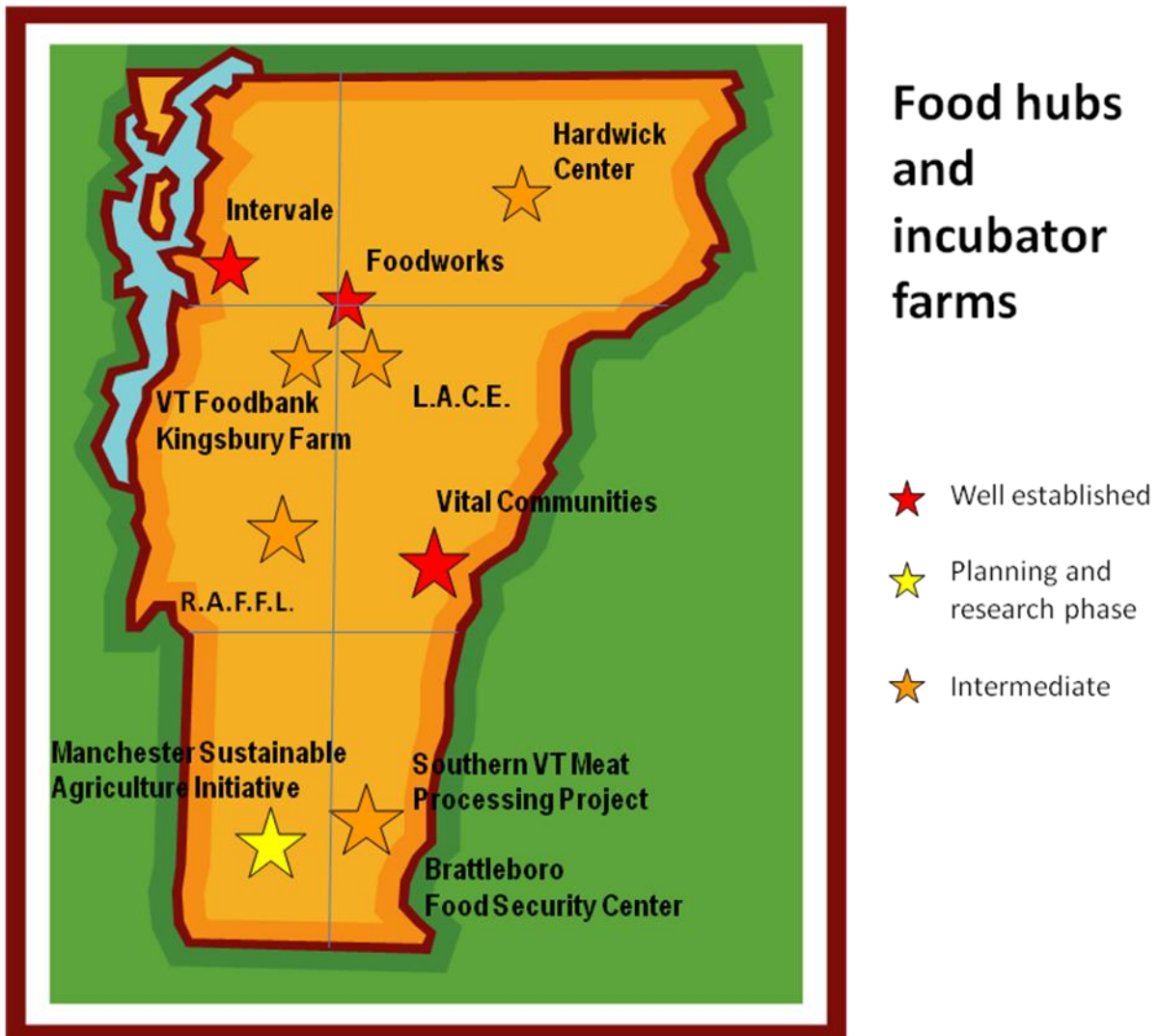
The statewide organizations are well-informed of one another's work and communicate with one another. However, the majority of respondents from statewide organizations indicated a desire for a centralized mechanism for sharing information between themselves, such as a listserv where they can post information about projects, research, upcoming events and policy meetings on a regular basis. Because they share similar missions, there is often overlap between projects initiated by the statewide organizations. To avoid overlap, it would be helpful for the statewide organizations to determine who will be responsible for specific actions and projects in order to reduce duplication of efforts and alleviate competition for funds. In particular, with the expanded efforts of the VAAFM'S Buy Local programs, there needs to be clarity between the tasks and roles the Agency of Agriculture Farms and Markets will be responsible for and those that the other statewide non-profits will assume.

While regional and community-based groups may not be aware of other community level groups in distant regions of the state, they are finding creative ways to collaborate with non-profit organizations within their own regions and communities. Examples of local non-profits that are engaging with regional and community-based local foods group include St. Johnsbury Food Co-op, the Huntington Historical and Community Trust, Friends of the Mad River, and the Thetford Energy Committee and Recreation Department and the Mettowee-Poultney Natural Resource Conservation District.

Of all of the types of groups, the newest regional food hubs seem to be in the least communication with one another (See Figure 1 and Box 1). This may be due to a combination of the geographic distance between the groups and the fact that as organizations that are still in their start up phases and largely dependent on volunteers they have limited time and resources.

Key suggestions for increasing collaboration among all groups include: 1) creating a central vehicle for sharing information; 2) convening a summit of major food and agriculture stakeholders; and 3) developing a vision and action plan to strengthen Vermont's food system including specific policy recommendations, a funding strategy, and metrics for evaluating success.

Figure 1



Box 1 Food Hubs and Incubator Farms

Foodworks at Two Rivers

Founded in 1987 to address the root causes of childhood hunger through hands-on food and gardening education, and a founding member of VT F.E.E.D., Foodworks is currently a driving force for strengthening Central Vermont's food system through the following programs:

- Farm to Table (distribution program)
- Foodbank Farm
- Food, Garden and Nutrition Education
- Central Vermont Food System Council

Vital Communities: Valley Food and Farm

Vital Communities fosters the relationships that support agriculture in the Upper Connecticut River Valley of Vermont and New Hampshire. They bring together consumers, farmers, chefs, processors, schools, grocers, distributors, and others through publications, events and community partnerships. Examples of their programs include:

- Flavors of the Valley and Feast in the Field culinary events
- Valley Food and Farm Guide
- Farm to Dartmouth Program
- Fresh Connections Workplace Benefit Program

Hardwick Center for an Agricultural Economy

Founded in 2004 by a group of entrepreneurs in the Northeast Kingdom, CAE conducts research into value-added product opportunities; provides consumer education and outreach and technical training for farmers on processing, branding, and marketing. They are building infrastructure for shared processing, storage, and marketing. The Center's current and proposed programs include:

Hardwick Area Eco-Industrial Park

- Vermont Food Venture Center
- Atkins Field Agricultural Education and Resource Center (Incubator)
- Hardwick Community Gardens

Vermont Foodbank Kingsbury Farm

The state's largest hunger relief organization, the Vermont Foodbank, will purchase the Kingsbury Community Farm from the coalition of the Mad River Valley Localvore Project, the Mad River Valley Planning District, Friends of the Mad River, and Vermont Land Trust in 2009. They intend to use the farm to:

- House the Vermont Foodbank's Agricultural Resources programs
- Feed hungry Vermonters with food produced on the farm and shared through nearby food distribution centers
- Provide an "Education, Resource, and Community Center" to educate people about hunger and food security
- Provide land for an edible forest garden and walking path

Key challenges to Vermont's food system include

- Gaps in food system infrastructure (distribution issues, Processing centers and slaughterhouses, storage, marketing assistance, access to high-speed internet)
- High costs of fuel and energy, labor and inputs for farmers
- Access, price and succession of farmland for beginning farmers
- Lack of unified vision and coherent action plan and policy platform for creating a local food system among stakeholders
- Access to local foods for Vermonters of all income levels, while maintaining a fair price point for farmers
- Educational and technical assistance for producers and processors
- Technical and regulatory barriers to waste and nutrient management

Gaps in the food system infrastructure are perceived as the most significant challenge to a strong local food system in Vermont. This perception is supported by a number of other studies (Timmons 2006a and 2006b; Michahelles, 2007; VT Beef Producers Association, 2007). Of these, distribution issues were cited most often.

To demonstrate the wide range of recent local foods initiatives in Vermont, the Figure 2 shows a sample of initiatives. The initiatives demonstrate work that has occurred over the last three to five years and its relative geographic distribution. The sample also illustrates newer, less well known initiatives. More established and well known organizations' programs often cross multiple categories, but are usually only cited in one category.

Figure 2 Local Food Initiatives in Vermont

PRODUCTION AND FOOD SECURITY

Statewide

VT F.E.E.D.(NOFA, Shelburne, Foodworks)

VT Foodbank Agriculture Programs

Community Kitchen

Salvation Farms Statewide Gleaning Network

Vermont Foodbank Farming Network

VT Community Garden Network

VT / NH Seed Saving Group

Vermont Grain Growers Association

Northwest

South Hero Land Trust

New Farms for New Americans

Lamoille Conservation District, Lamoille Valley

Farm and Forest Initiative

Farm and Forest Forum

Farm and Forest Directory

Eat Local Series w/ Stowe Library

Movie Series with Rural VT and Lanpher

Library

Intervale Food Enterprise Center (planned)

Burlington Food Council

UVM Dining Services Social Responsibility

Initiatives

Burlington Permaculture

Northeast

Green Mountain Farm to School

Hardwick Center for an Agriculture Based

Economy

Sterling College

Central West

RAFFL (Rutland Area Farm and Food Link)

Community Farm and Agricultural Resource

Center (planned)

Farm to Institution Local Purchasing Project

Middlebury College Farm and Food Program

Central East

Woodstock Agricultural Forum
Bethel Farm to School
Randolph Farm to School
L.A.C.E. (Local Agricultural Community Exchange)
Kingsbury Farm / VT Foodbank
Two Rivers / Foodworks
 Farm to Table
 Foodbank Farm
 Food, Garden and Nutrition Programs
Vital Communities (multiple programs)
 Dartmouth College Farm to Cafeteria
 Workplace Benefits
Willing Hands
North Country Farming Network (New Chapters in Orange and Windsor Counties)

Southwest

Green Mountain College Farm to College
Rutland Eco-Municipality (planned)

Southeast

Brattleboro Post Oil Solutions Projects
 Regional Food Sustainability
 Brattleboro Localvores
 CSA in every town
 (Re) Learning to feed ourselves (classes)
 Community Gardens
 BPOS Food Security Center (planned)
Reinventing Health
 Plant-a-row for Children in Southern Vermont

PROCESSING

Statewide

Agency of Agriculture Farms and Markets
 Innovative Kitchens Grants
 Mobile poultry unit
 Mobile produce freeze unit

Southeast

Southern Vermont Meat Processing Project

TRANSPORTATION, SOURCING AND DISTRIBUTION

Statewide

Agency of Agriculture Farms and Markets
 Local Foods In Government Initiative
 Farm-to-School Grants
VT Fresh Network
 E-Commerce System Development
 Professional Development Colloquia
 Institutional Purchasing
 Scaling it Up! Workshops (w/ partners)
 Matchmaking events (w/ partners)
NOFA-VT
VT Farmers Market Association
EBT Debit Card Pilot Project (w/ other partners)
 Farm Shares and Senior Farm Shares
CT Valley Neighboring Coops Association

Northwest

Intervale Center
 Burlington Food Hub
 Food Basket
Fletcher Allen Healthy Food in Health Care Initiatives
Burlington Schools Sustainable Schools Project

Central West

ACoRN (Addison Co. Relocalization Network)
Online Market
Central East
Vital Communities
 Fresh Connections
 Farm to Dartmouth

Southwest

Manchester Green Sustainable Agriculture Project

**MARKETING AND PROMOTION,
CONSUMER EDUCATION, FAIR TRADE**

Statewide

Agency of Agriculture Farms and Markets

Online directories of VT Products

Online Marketing Manual

Moving VT Agriculture Forward (w/
VCRD)

International workshop on Terroir

Buy Local Signage w/ Health Dept.

Food Directory Grants to regional groups

Mini-grants for community and producer
groups

Eat Local National Challenge

VT Ski Burger (similar projects may be
planned)

VT Fresh Network

Dining Challenge

Farmers Dinners

NOFA-VT

Vermont Farmers' Fare and Mobile Pizza Oven

Rural Vermont (also see Policy Section)

Hot Cocoa and Ice Cream Socials

Vision for Vermont Agriculture Planning
Meetings

Film Screenings

Local Foods Cookbook

Cooking Classes

VT Localvores (statewide umbrella group)

Fair Trade VT

Edible Green Mountains

Vermont Fences

Iron Chef Competitions

Local First Vermont

Local Banquet

VEI "Menu for the Future" Reading Groups

Good Agriculture Practices for Home Gardeners

Central East

Fiddlehead Festival

Vital Communities Valley Food and Farm

Flavors of the Valley

Valley Food and Farm Guide

Tidbits e-newsletter

VTEL Centerfold

Orange Co. Farm Bureau Local Agriculture Ad
Campaign

Upper Valley BALLE type Group (planned)

Fair Trade Brattleboro

Central West

RAFFL

Annual Farmers Gathering

New Market Identification and Outreach

Locally Grown Guide

Farm Tours

**COMPOSTING , ENERGY and NUTRIENT
MANAGEMENT**

Statewide

Vermont Carbon Farmers

Legal Compost Initiative

Municipal Energy Committees

Vermont Energy and Climate Action Network

ANR Committee on Waste

Vermont Organics Recycling Summit

VT Sustainable Jobs Fund involved with a
number of composting initiatives

Northeast

Northern Vermont Composting Partnership

Central East

Vermont Technical College Food Waste

Biodigester

Ottaquechee NRDC food scrap reduction
program

**KNOWLEDGE PRODUCTION:
RESEARCH AND LITERATURE**

Statewide

UVM Food Systems Policy and Leadership
Institute
Rural VT Consumer and Farmer Surveys
The Future of Farming in Vermont.....
CT Valley Coops Initiatives
 Scenario Planning
 Local Food Supply and Networking
Moving VT Agriculture Forward Working Task
Forces
 Branding and Marketing
 Business Development
VT Pasture Network Study on Meat Processing
Action Plan for Sustainable Agriculture and
Regionally-Based Food Production in
Vermont
UVM Extension review of local food research at
UVM Extension (K. Schneider)
Civic Agriculture in VT. V. Bitterman, 2007
Cheryl Fischer's report to Johnson Family Fund,
2008 on CHE initiative
Opportunities for a Sustainable Meat Industry in
Vermont, VT Beef Producers 2007
Cheryl Mitchell, UVM & Dept of Health WIC
Interviews
NOFA-VT Electronic Benefit Transfer Study
VT Buy Local Report
VT Agency of Agriculture's Buy Local
workshop notes
VBSR Farm and Fuel Group
VSJF Seed Study
Middlebury College Food Systems Study

Northwest

Recent Intervale studies

Intervale Farmer Surveys for Local Food
Hub (in progress)
Center for Rural Studies Consumer Survey for
Food Hub (SARE), 2007
Bibliography on VT Local Foods Literature

Northeast

Carbon Materials Inventory
Rural Municipal Emissions Assessment

Central West

Rutland Nutrition Coalition Survey on food
consumption patterns
Green Mountain College Food System Block
Course Studies
RAFFL Consumer and Producer Surveys

Central East

Teal Farm

Southwest

Bennington Co. Industrial Corporation Ag
Group

POLICY

Statewide

Poultry Bill (2007) H. 522
Farmer Protection Act (2006)
Farm Fresh Milk (2008) H. 616
Farm Fresh Meat (2208/ 2009) S. 322
Local Foods Resolution
Capital Bill: Sec. Farmers Markets
Improvements
Act 38: Relating to the Viability of Vermont
Agriculture (2007) H. 522

2. Mapping Vermont's Local Food System

Dan Erickson, Department of Plant and Soil Sciences, University of Vermont

The aim of this project was to map and analyze local food system density in Vermont. To accomplish this goal several point maps of local food system activity were combined. These included farmers' markets, farm stands, CSA farms and consumer coops located in Vermont and the Upper Valley of New Hampshire. The latter region was included because many Vermont farmers participate in farmers markets and/or sell to coops across the state line.

This project, funded by the Vermont Sustainable Agriculture Council, builds upon mapping work previously funded by the Council and completed by Ms. Becca Grover. Ms. Grover developed a point map illustrating the spatial distribution of the local food system here in Vermont. Specifically, she geocoded farmers' markets, farm stands, CSA farms and consumer coops to develop point maps.

Additional point locations were acquired from the Vermont Department of Agriculture and the Valley Food and Farm program at Vital Communities to update the work done by Ms. Grover. The Valley Food and Farm program maintains a detailed database of food system activity in the Upper Valley of Vermont and New Hampshire. In order to be consistent with Vermont data, only farmers' markets, farm stands, CSA farms and consumer coops were mapped in the trans-border region. The study presented here combined all of the individual point maps to develop a local food system density map. The result of this process illustrates areas within Vermont and a portion of New Hampshire that have varying levels of local food system activity.

The Local Food System Density map, as seen below, was used to identify areas of low medium and high activity for subsequent analysis. Using the Population Centers map (included below) as a guide, the approximate center of each activity area was delineated and subsequently buffered by 5 and 10 miles. These buffer zones were used to tally the number of farmers' markets, farm stands, CSAs and coops as presented in Table 1 and 2 below. Population counts (based on the 2000 Census) within these buffer zones are also noted. A "close-up" map, illustrating the local food system density in the Upper Valley is also presented below.

Several areas with high population concentrations within the 5 mile buffer zones appear to have low activity levels with respect to local food. These include Bennington, St. Albans, St. Johnsbury and Newport. The buffer analysis high activity areas shows that the Randolph and Putney-Westminster locations, both with populations less than 5000, appear to support a viable local food system. Thus, it stands to reason that the aforementioned locations, all with significantly higher populations, should be able to support increased activity. When a 10 mile buffer is used St. Albans could be included with Middlebury and Rutland at the medium activity level. This change in activity level is due to additional farm stands present in the larger radius.

The results from this and subsequent studies can be used to target new marketing and development efforts. Along these lines, a map of park and ride and rest area locations in Vermont has been included. In neighboring New York State, during the summer and fall harvest season, farmers often set up a stand at rest areas located on the NYS Thruway. Rest

areas in Vermont along with park and ride locations could serve as a similar point of purchase for travelers and commuters heading to or from their place of work.

The additional spatial analysis presented here provides new information about the local food system, painting a picture with details not readily apparent in point maps alone. While this research effort expands our knowledge of the spatial distribution of the local food system, additional spatial data layers (e.g. processing facilities (slaughterhouses), restaurants, and other points of purchase (e.g. country stores and independent grocery stores) need to be geocoded in order to paint a complete picture of the Vermont's food system. Future mapping efforts should also include border areas in New York, Massachusetts and Quebec.

Table 1 - Local Food System Activity within a 5 Mile Buffer of Named Location

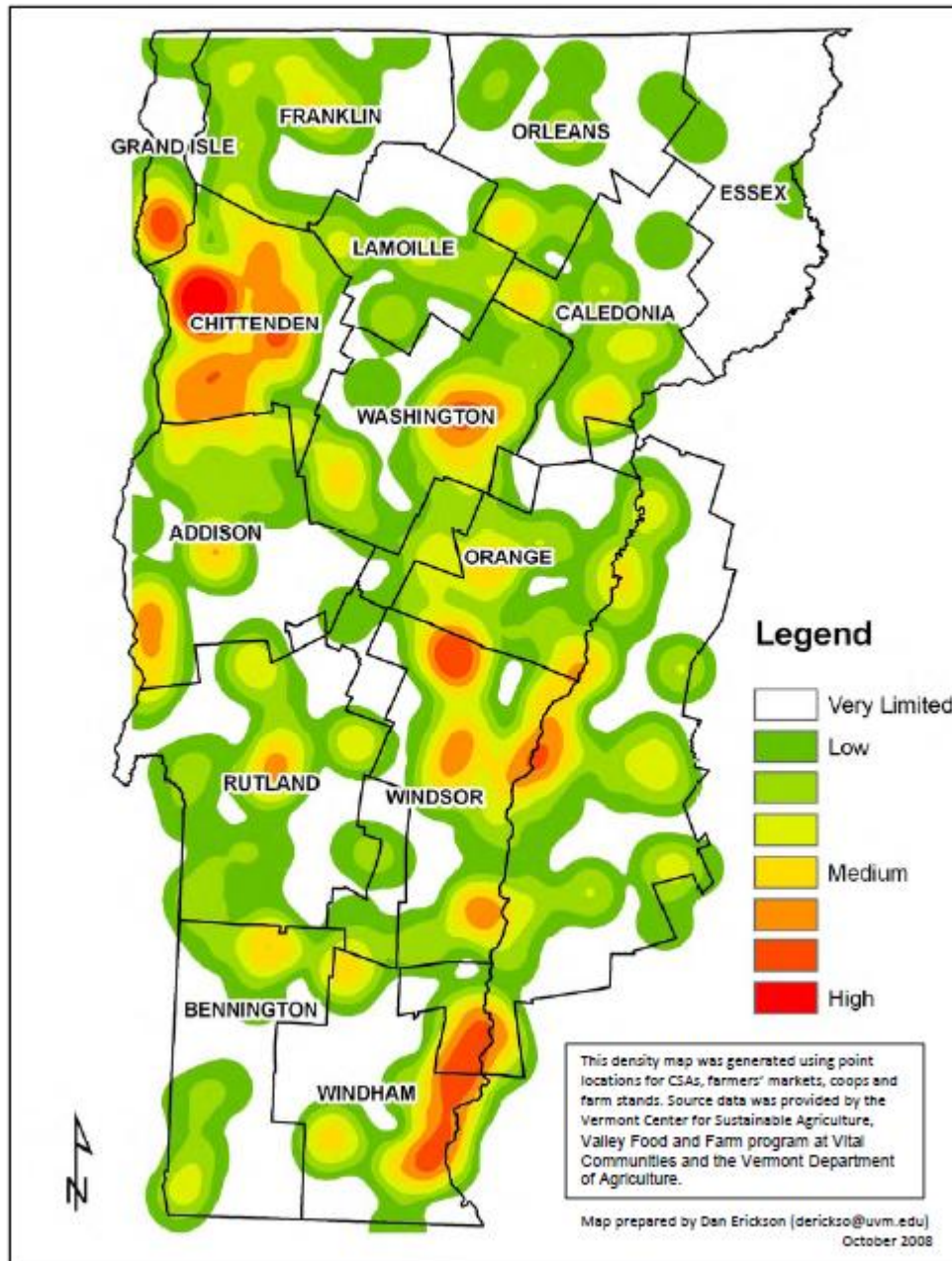
			Type of Activity				
Activity Level	Location	Population	Coop	Farmers' Market	CSA	Farm Stand	Totals
Low	Bennington	18541	0	1	0	1	2
	Newport	9280	0	1	0	0	1
	St. Albans	15340	0	1	0	1	2
	St. Johnsbury	9102	1	1	0	1	3
Medium	Middlebury	10070	1	1	0	3	5
	Rutland	27599	1	1	1	4	7
High	Burlington	84404	1	4	4	8	17
	Putney and Westminister	4809	1	0	2	6	9
	Randolph	4660	1	2	2	5	10

Table 2 - Local Food System Activity within a 10 Mile Buffer of Named Location

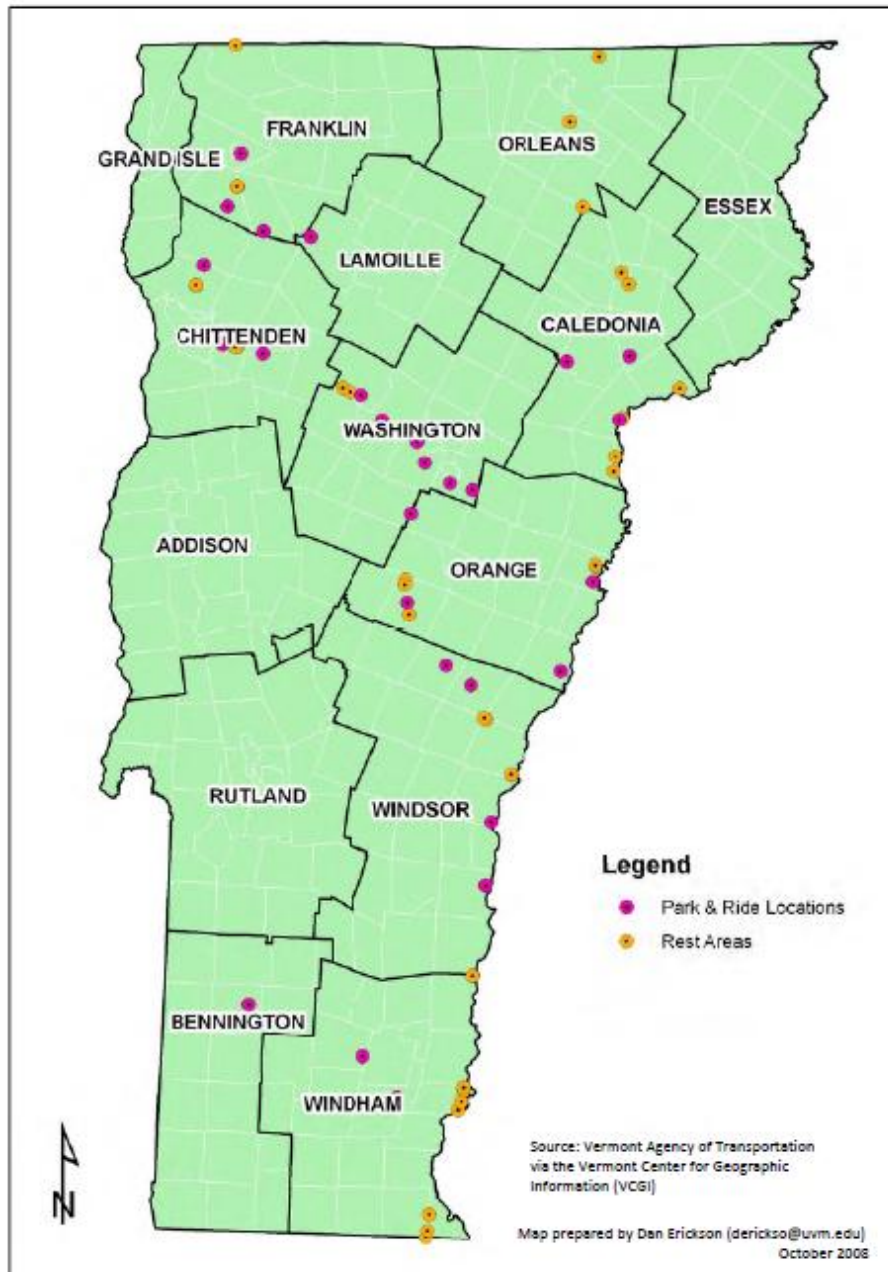
			Type of Activity				
Activity Level	Location	Population	Coop	Farmers' Market	CSA	Farm Stand	Totals
Low	Bennington	23748	0	2	1	3	6
	Newport	15943	0	1	0	3	4
	St. Albans	31224	0	2	1	7	10
	St. Johnsbury	18947	1	2	1	4	8
Medium	Middlebury	18734	1	2	1	5	9
	Rutland	37598	1	1	1	6	9
							0
High	Burlington	122853	1	6	9	17	33
	Putney and Westminister	15127	1	1	6	17	25
	Randolph	13791	1	3	3	8	15

Local Food System Density

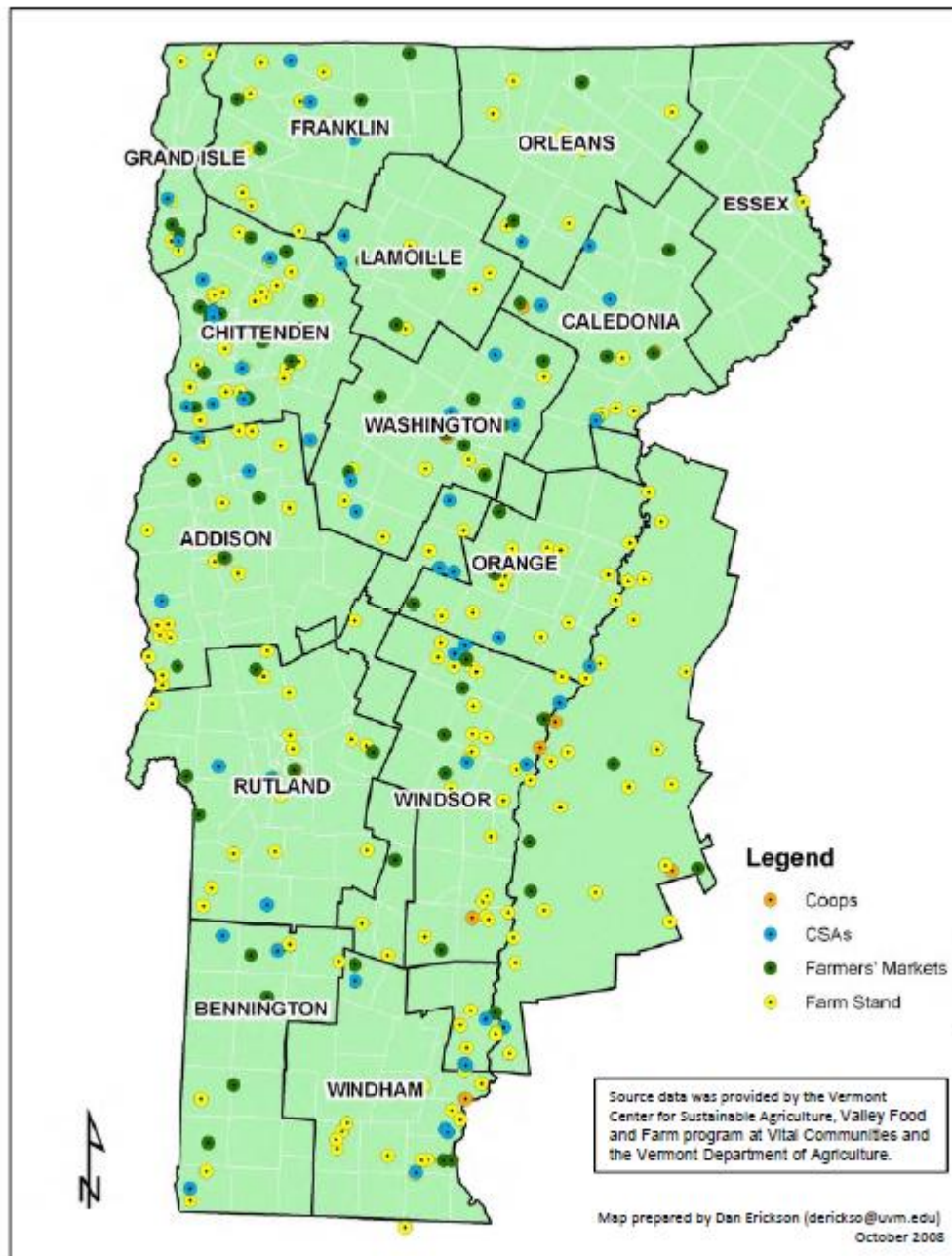
CSAs, Coops, Farmers' Markets and Farm Stands Combined



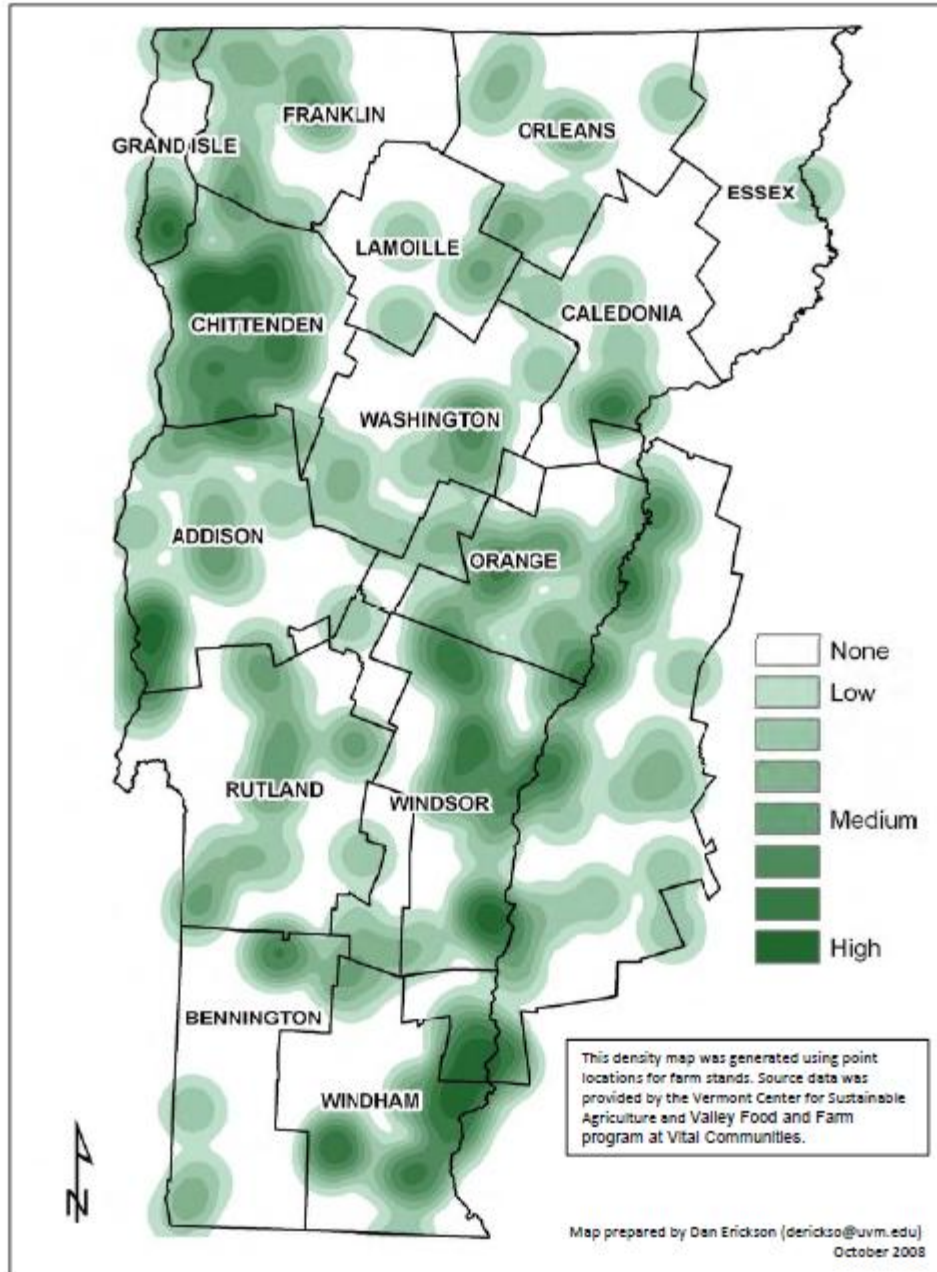
Potential Market Locations



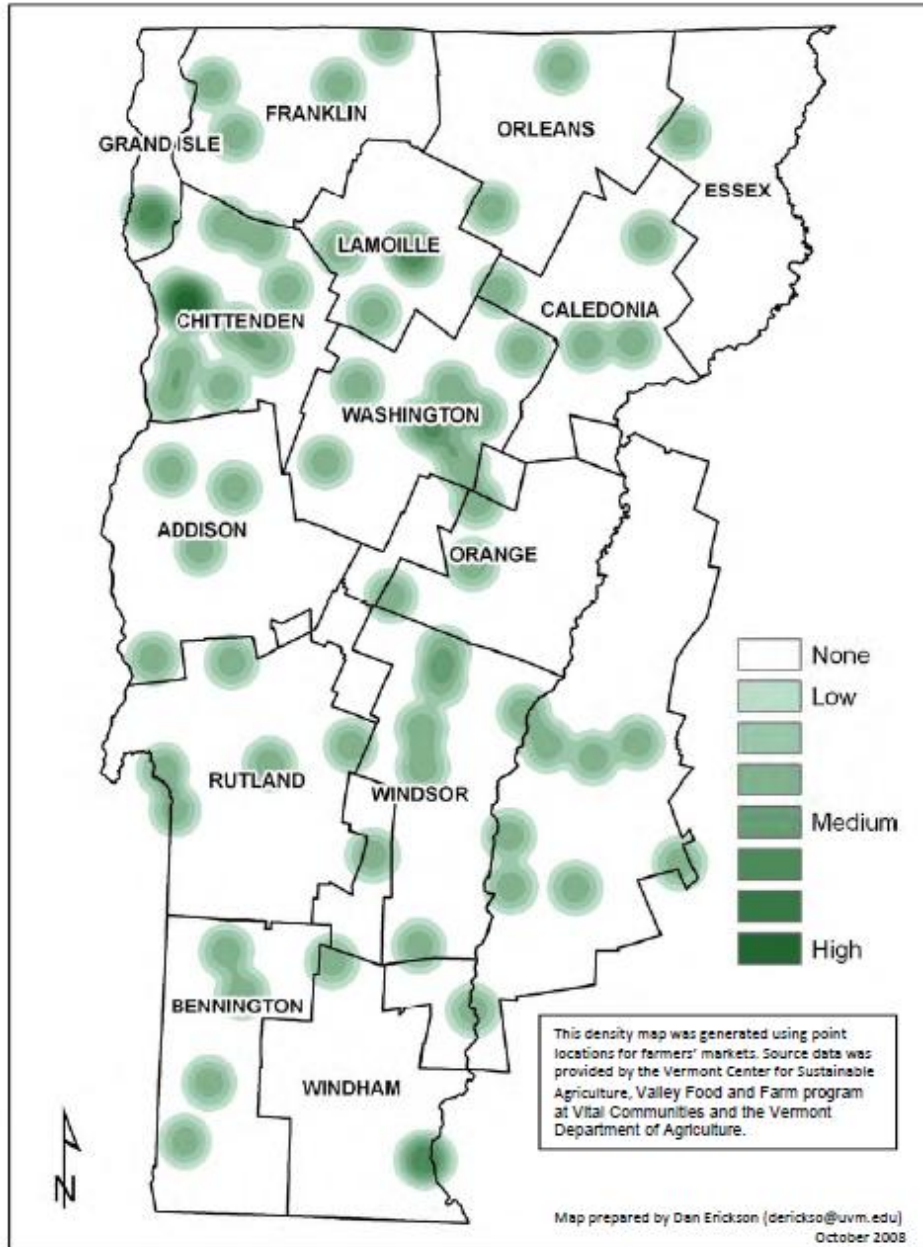
Local Food System Point Locations



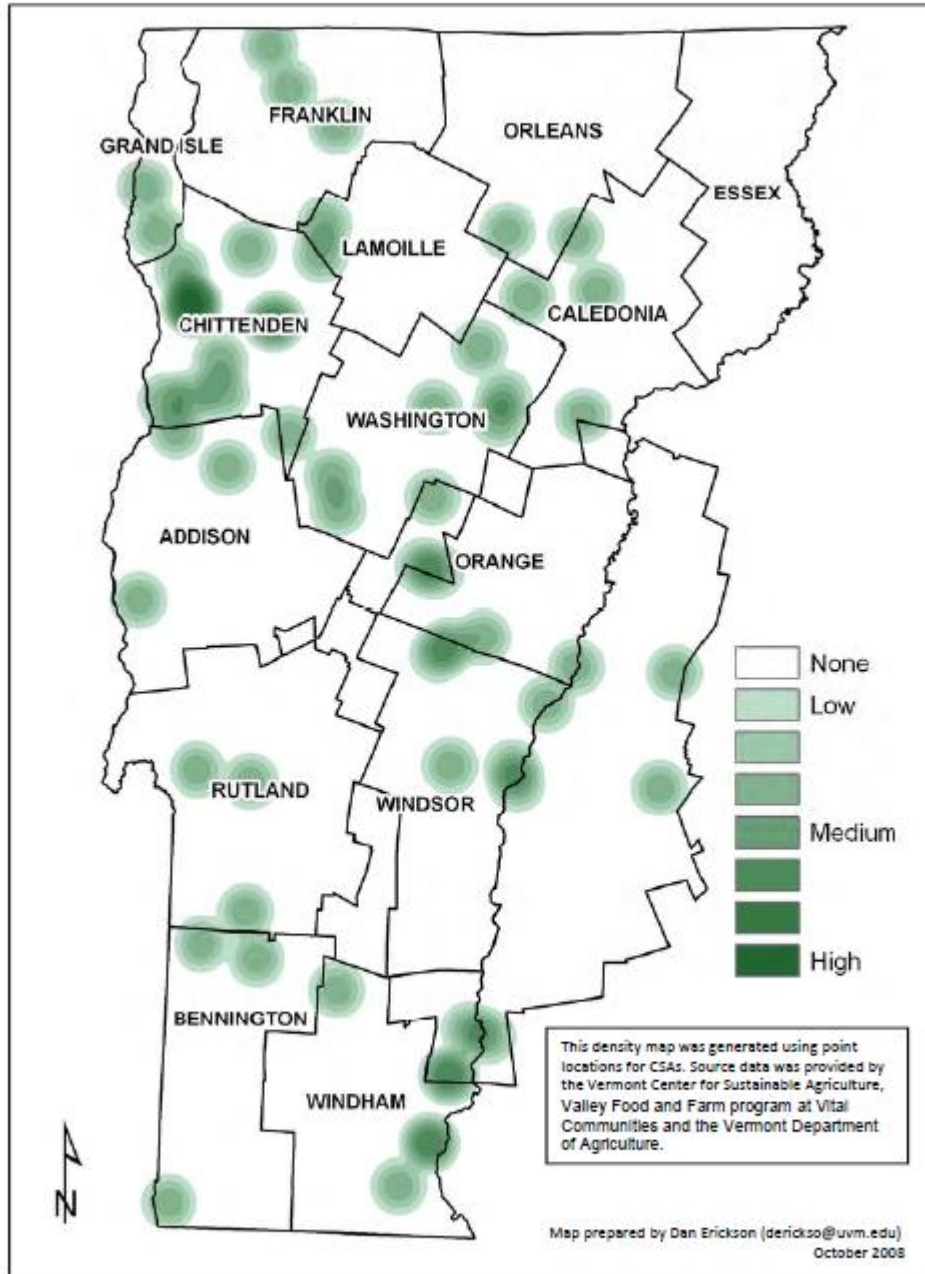
Farm Stand Density



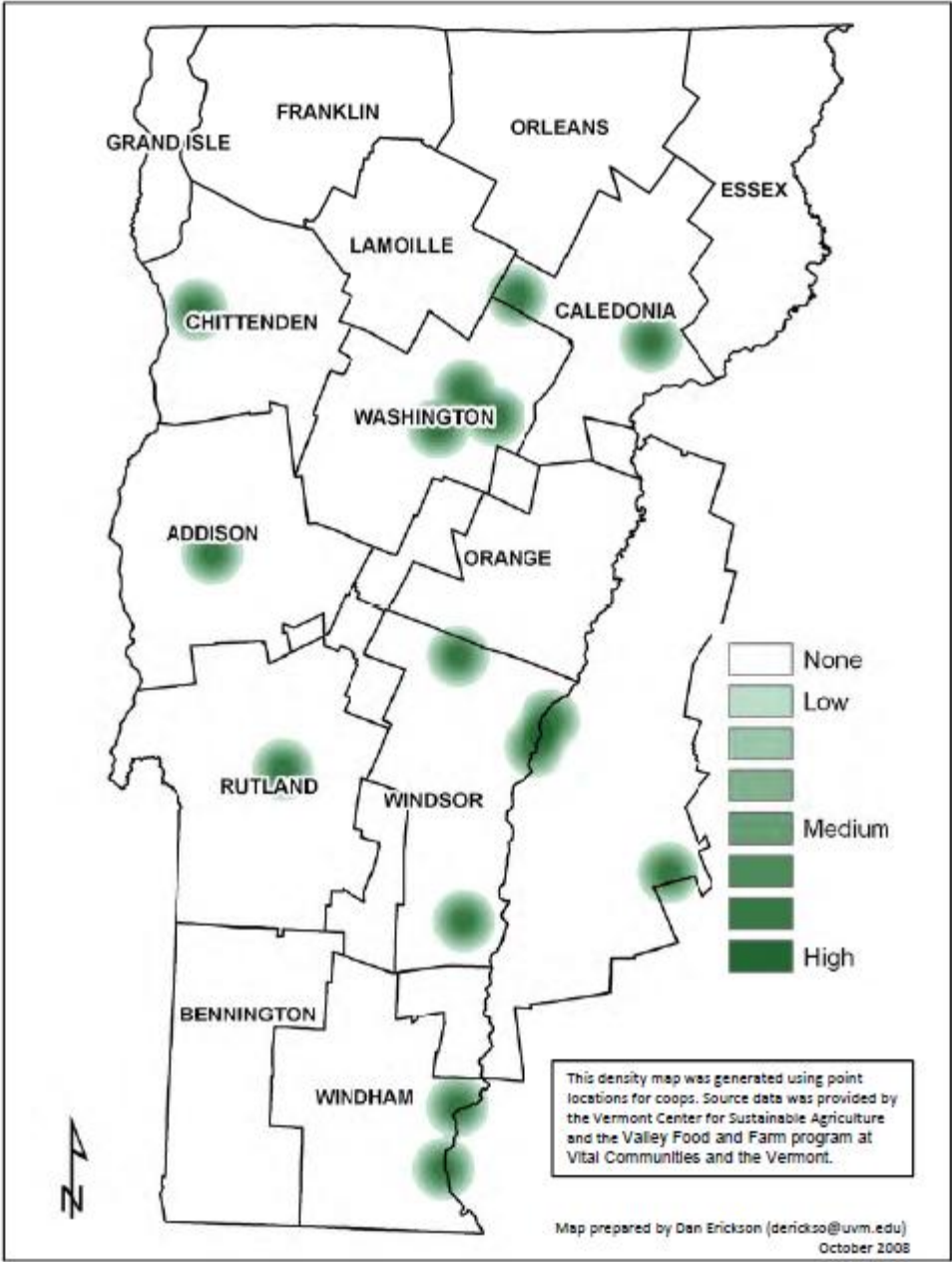
Farmers' Market Density



CSA Density



Coop Density



3. Sustainable Food Sourcing and Distribution in the Vermont-Regional Food System

Rachel Schattman, Rubenstein School of Environment & Natural Resources, Univ. of Vermont

The purpose of this study was to explore stakeholder values and propose indicators of those values in the interest of increasing sustainability in the Vermont-Regional food system. The study focuses primarily on food sourcing and distribution because of the limited amount of attention this sector has received. The study addressed the following research questions:

1. What are the values that influence expert stakeholder decision-making regarding sustainability in the regional food system?
2. What indicators show change in the food system related to these values?
3. What are other examples of food related indicator projects in the United States?

Expert stakeholders included agricultural producers, distributors, institutional purchasers, policy makers and others. Indicators are defined as simplified representations of highly complex interactions between the social, economic, and environmental components of communities.

Data analysis identified major themes and the five most common stakeholder values:

1. Financial viability
2. Promotion of the local food economy
3. Environmental integrity
4. Community wellbeing
5. Quality of service or product

Indicators that measure these conditions are:

- Condition indicators: Those that describe the current state of a system. (Example: Annual direct sales of locally produced agricultural goods in Vermont.)
- Pressure indicators: Those that describe factors driving the system. (Example: The number of farm-to-school programs active in Vermont.)
- Policy response indicators: The presence or absence of legislative support in the food system. (Example: H.522, which demonstrates legislative commitment to support sustainable agriculture)

A review of past indicator projects indicates the following projects may be useful reference points to inform Vermont's work:

- Building a Case for Sustainable Food Systems – current national project. More details at <http://wallacecenter.org/our-work/current-initiatives/sustainable-foodindicators>
- Vivid Picture- conducted in California in 2005. More information is available at <http://www.vividpicture.net>
- Planting Prosperity and Harvesting Health: Trade-offs & sustainability /Oregon-Washington. Completed in 2008. More information is available at <http://www.pdx.edu/ims/foodsystems.html>
- A Plan for a Decade of Progress- Vermont Economic Progress Council. More information is available at http://www.publicassets.org/VEPC_report2002long-rangeplan.pdf.
- Council on the Future of Vermont (CFV). More information about the CFV project is available at <http://www.futureofvermont.org/>

Vermont is a rural state that demonstrates increasing dedication to enhancing the sustainability of the local food system. In order to do this more effectively it is necessary to understand how expert stakeholders in the food system make decisions, and how best to communicate the values behind those decisions. It is therefore important to further this study in two ways:

1. Compile data for the selected indicators that goes back at least 10 years.
2. Successful indicator sets are collected over a period of time. If this project is to reach its full utility, many years of data must be collected in order to fully understand trends in the Vermont-regional food system. It is best to revisit these indicators every 2-5 years in order to:
 - a. Ensure that they still correspond to expert stakeholder values.
 - b. Collect up to date data that will demonstrate trends in the food system over time.

If the necessary information is not available, then communities, research institutions, and policy makers must address the data gap. In this regard, it will be possible to document and tell the story of sustainability in the Vermont-regional food system.

While this study was framed to address food sourcing and distribution, stakeholder values related to this topic were not segregated from values associated with the food system as a whole. In addition, associated indicators that specifically addressed sourcing and distribution were not available. It would be beneficial for future studies to solicit specific sets of information from the food distribution sector. Further refinement and acceptance of the proposed indicator set by expert stakeholders themselves, along with supporting data collection and analysis strategies, will tell a story of sustainability in the regional food system over time, and identify areas where more work needs to be done.

The purpose of this study was to support sustainability in the Vermont-regional food system. There are three ways in which this can be accomplished. First is the articulation of values that drive decision making by expert stakeholders in the regional food system. The second application of this research is the creation of an indicator set associated with these values. Stakeholders can use the quantified data relayed by indicators for several purposes including internal sustainability benchmarking, as a tool for product, organization, or municipality differentiation, as a partnership-building tool, and a source of information. Policy makers can use the information relayed by indicators to justify legislation that favors sustainable practices. Researchers can use the set of indicators to evaluate what information is still needed to make sound decisions regarding food system sustainability. If the necessary information is not available, then communities, research institutions, and policy makers must address the data gap. The third application of this study is the learning and potential for collaboration presented through the review of prior food system related indicator projects on national, regional, and state levels. Specifically, the CFV project presents opportunities within Vermont for collaboration and deepening of understanding of sustainability in the Vermont-regional food system.

Table 1: Sustainability Indicators for Sourcing and Distribution in the Vermont-regional Food System 2008

Value	Indicator Type	Indicator	Source of Information	Collection Frequency
Financial Viability	Condition	Difference between livable wage and net income of VT farmers.	Legislative Joint Fiscal Office (JFO) http://www.leg.state.vt.us/ifo/Reports/2007%20Basic%20Needs%20Budgets.pdf USDA Agricultural Census http://www.agcensus.usda.gov/	JFO is collected every year (?). Census data is collected every 5 years.
	Pressure	Age distribution of VT farmers.	USDA Agricultural Census http://www.agcensus.usda.gov/	Every 5 years
	Policy response	H.522 – legislative intent to support sustainable agriculture	Vermont Legislative Reports and Publications http://www.leg.state.vt.us/docs/legdoc.cfm?URL=/docs/2008/bills/intro/H-522.HTM	n/a
Local Food Economy	Condition	Direct marketing sales in Vermont.	USDA Agricultural Census http://www.agcensus.usda.gov/	Every 5 years
	Pressure	Number of farm to school programs in Vermont.	National School to Farm http://www.farmtoschool.org/VT/programs.htm	Continually
	Policy response	Legislative definition of “local.”	Legislative Act S.322 http://www.leg.state.vt.us/DOCS/2008/BILLS/HOUSE/S-322.DOC	n/a
Environmental Integrity	Condition	Acres of farm, forest and conserved land.	USDA Agricultural Census http://www.agcensus.usda.gov/ UVM Center for Rural Studies http://crs.uvm.edu/	Every 5 years
	Pressure	Act 250 permits granted per year/ Act 250 permits sought per year	Missing data	n/a
	Policy response	Act 250	State of Vermont Legislature, Vermont Statutes Online http://www.leg.state.vt.us/statutes	n/a

4. Farm Energy Innovation in Vermont

Edward Delhagen, Verdana Ventures LLC, Randolph, Vermont

The powerful changes affecting Vermont's economy over the past ten years have prompted groups of farmers and their allies in the state to innovate a range of energy production options. This strategic analysis of the emerging farm energy sector for the Vermont Sustainable Agriculture Council explores farm energy production through the lens of *innovation*. This lens provides valuable perspectives from farmers and their allies into what is taking shape.

This research investigates the notion that by working through *innovation networks* or *hubs*, groups of Vermonters (e.g., farmers, advocates, researchers, utilities, state agencies, community groups, non-profits, etc.) can develop and implement scalable farm energy solutions that will be adopted over time by the majority of interested farmers. To gather information, the author interviewed farmers and organizational leaders involved with farm energy around the state between August and December 2008. Their insights, perspectives, questions and dilemmas offer insights into how farm energy activities such as methane digestion, biodiesel, wind and other farm energy sub-sectors are progressing. The report offers suggestions for Vermont 25 by '25, a statewide initiative aiming to increase production of renewable energy in the state.

Energy Innovation on Vermont Farms

Innovation is the introduction of a new idea or an improvement to an existing product or process. Innovation networks are groups of people working together to introduce new ideas, products, services, processes or systems to broader audiences. Innovation hubs are places, either physical or virtual, where participants in a network share proximity to one another. Identifying existing networks and how farmers share information is a key element to knowing how innovations either spread or stall.

Vermont farms have substantial experience with developing and adopting energy efficiency innovations in the maple sugaring and dairy sectors. Both have networks and professional organizations that connect farmers. They also feature means for developing and introducing new technologies. Progress with energy efficiency highlights how those seeking to advance innovations continually educate and evaluate their strategies as they reach for new segments of a target audience.

To gain insight into how future farm energy production may develop, this report explores examples of anaerobic digestion and biodiesel. These farm energy sub-sectors have moved from concept to implementation over the past ten years or less by following predictable steps and ensuring the build out of key innovation components. Example One reviews the introduction of *anaerobic digesters* into the state beginning with the Blue Spruce Farm in Bridport, a project that helped lay the foundation for subsequent farmers to learn from one another and participants in a farm "biogas" innovation network to create a pathway for others to follow. Example Two entails the development of *oilseed crop and farm biodiesel production*. Two innovation hubs are emerging at the State Line Farm in Shaftsbury and Borderview Farm in Alburgh where farmers are learning directly from one another to understand the dynamics and challenges of growing and processing seed oil crops to make liquid fuels and feed products.

Findings and Discussion

The farm biogas and biodiesel examples provide tangible evidence in support of this paper's hypothesis that through innovation networks, groups of Vermonters can develop and implement scalable on-farm energy solutions through concept-to-market processes. Conversations with farmers and farm energy stakeholders indicate that certain components appear important to innovation networks. These include:

- Ideas and concepts about products, processes, services and systems
- Learning opportunities including scanning, study tours and discussion groups
- Proto-types, pilot and demonstration projects
- Feasibility studies and strategic analyses
- Communication channels and vehicles
- Public and private financing
- Technical assistance, "circuit riders" and consultants
- Professional associations and peer networks
- Mature technologies from local and non-local vendors

Conclusions

Farm energy production is emerging as a viable option for farmers to pursue thanks to the innovation networks that have developed systems adapted for Vermont. While this report notes substantial progress with anaerobic digestion and biodiesel production, neither of these sub-sectors has gone commercial, so the jury remains out on whether the innovation networks will succeed in moving each to scale.

As anaerobic digestion and biodiesel production mature in Vermont, other kinds of farm energy production are emerging and competing for resources. The state is well positioned to expand production of farm energy in the next five years. Understanding the components of innovation networks may offer clues for those interested in fostering greater participation and achievement of farm energy production.

This research shows that communication among peers plays a pivotal role in advancing innovation. In addition, positive experiences encourage individuals to promote an innovation. Members of innovation networks help to do so by testing assumptions and evaluating performance through deliberate learning, proto-typing, and feasibility stages that condition the pathway toward greater adoption. While this process takes time and resources, success at the front end can increase the rate of penetration at later stages.

5. Developing Standards for Sustainable Biofuels in Vermont

Netaka White, Biofuels Director, Vermont Sustainable Jobs Fund

Background

For the past four years, the Vermont Sustainable Jobs Fund (VSJF), Vermont Biofuels Association, University of Vermont Extension, University of Vermont Center for Sustainable Agriculture, the Sustainable Agriculture Council, and others have been exploring the development of Vermont's biofuels market, especially on-farm biodiesel production and its role in helping farms reduce their dependence on fossil fuels and reduce imported commodities.

Local biofuel production and use is among the strategies that can help our communities prepare for, mitigate against, and adapt to peak oil and climate change. However, controversy surrounding commodity-scale biofuels (e.g., the food and fuel debate) has circulated in the press and activated a number of national and international initiatives aimed at developing principles and standards for biofuel production practices that are sustainable, measurable and verifiable.

The Austin based Sustainable Biodiesel Alliance provides us with a working definition of sustainable biodiesel as follows;

“Sustainable biodiesel is biodiesel that is produced in a manner that on a lifecycle basis, minimizes the generation of pollution, including greenhouse gases; reduces competition for, and use of, natural resources and energy; reduces waste generation; preserves habitat and ecosystems; maintains or improves soils; avoids use of genetically modified organisms; and provides community economic benefit that results in jobs and fair labor conditions.”

As a practical matter, the scale of biofuels production in Vermont is categorically different than what might be described as industrial-scale production in the Midwest, Brazil, and other places. Vermont's production of first generation biofuels, namely biodiesel from oilseed crops such as soy, canola and sunflower, will likely remain at a small-scale for the local production of fuel, feed, and food for local consumption. Second generation biofuels such as algal biodiesel and cellulosic ethanol have smaller footprints than first generation biofuels, they typically do not rely on land used for critical food production and they produce more biofuel per acre.

From this perspective, when commentators discuss the biofuels controversy, they are not talking about what is taking place in Vermont. Nevertheless, it is important to stay informed about the development of sustainable biofuels standards, especially to the extent that Vermonters can inform their development at the national level and benefit from their implementation regionally and locally.

Project update

In the full Interim Project Report, submitted to the Sustainable Agriculture Council in December 2008, VSJF has detailed the progress made in each of the four main areas of this project scope of work and created an outline of nine key sustainability issues being examined by standard setting organizations. Instead of repeating the details here, a brief update follows.

VSJF has been keeping track of international standard setting by the Roundtable on Sustainable Biofuels (RSB) and several of the domestic standard setting organizations and has created a synthesis (matrix) of over 2-dozen categories of sustainability. Key categories affected by biofuel production and included in most sustainability guidelines are:

- Greenhouse Gas Emissions
- Energy Inputs
- Soil, Water, and Air Quality
- Biodiversity & Ecosystems
- Food Security
- Local Ownership
- Local Consumption
- Human Rights/Labor
- Agrochemical Use
- Use of Genetically Modified Organisms (GMOs)

Within this matrix, the VSJF has indicated that the sustainability standards and principles being developed by the different organizations are generally consistent.

Since biodiesel is currently the most common biofuel in Vermont, VSJF worked closely with Jeff Plowman, Executive Director of the U.S. based Sustainable Biodiesel Alliance (SBA), and served on several working groups (i.e., feedstock, production, distribution, and end users) to develop SBA's draft Baseline Principles for Sustainability. Both the RSB and SBA released their draft principles for public comment in August 2008.

Consequently, the timeline for completing this project by the summer of 2008 (as defined in the original agreement) has been impacted. However, both the small-scale of Vermont's biofuels production capacity and the overriding emphasis on 'local production for local use' align nicely with the emerging principles and standards being set by the RSB and SBA, even at this early stage.

Even though the standards for developing this process is now being led by a national group, VSJF remains closely involved in drafting the final SBA Baseline Principles for Sustainability. VSJF is pleased to report that our contributions have been well received. By extension, Vermont has had a role in shaping how future markets and policy makers will recognize and value the benefits of community-scale biodiesel in the United States.

Next Steps

1) Complete Task 2 (of the original proposal) – Test the market demand and acceptance of a sustainable biofuels standard in Vermont.

One of the key tasks in our research is to convene a group of Vermont biodiesel sector stakeholders, such as biodiesel producers, commercial fuel users and fuel dealers, to evaluate their interest in producing, distributing or using a “green certified” biofuel product.

Now that a national organization has taken the lead on developing the principles and standards for developing a 3rd party verification protocol for biodiesel, VSJF chose to wait until the BPS was complete before convening Vermont’s biodiesel stakeholders to solicit their feedback.

It will be early 2009 before the SBA Board signs off on the BPS and the next step in the standards and certification process can begin. Once the BPS has been finalized and guidelines are established for a series of pilot projects to test the BPS in Vermont, VSJF will hold one or more of these stakeholder meetings - tentatively beginning in February 2009. The meeting(s) will serve to identify pilot project sites in Vermont and generate feedback on the market demand and readiness in the state to embrace a sustainable biodiesel certification process. Our final project report will document the results of the meeting(s) and then be forwarded to the SBA and the International Roundtable on Sustainable Biofuels, and disseminated widely throughout Vermont and New England.

2) Engage Vermont producers directly in Sustainable Biodiesel pilot projects.

The Vermont Sustainable Jobs Fund has been asked by the SBA to identify and facilitate several Vermont farms and businesses that are willing to test the BPS against their own practices. The stakeholder meeting(s) identified above, will help secure commitments from farms and businesses that want to voluntarily submit to interviews and an audit of their practices and procedures, i.e., “pilot projects”. This is the next step in developing a certification protocol and is being carried out in all regions of the country by the SBA and SBA member businesses.

Provided VSJF and SBA can identify new funding sources to help develop the pilot projects for the Northeast, the Sustainable Biodiesel Alliance will guide the VSJF selected pilots through the survey and evaluation process in 2009.

3) Complete Task 4 (of the original proposal) - Draft an implementation strategy or “road map” for adopting the standards in Vermont.

The SBA Board approved BPS will be introduced to the biodiesel industry during the 6th annual Sustainable Biodiesel Summit, taking place in San Francisco on January 31 and February 1, 2009. VSJF will be participating in this influential gathering of biodiesel industry and agriculture representatives who meet to further the work of sustainability in the biodiesel industry at large.

After assimilating ‘lessons learned’ from the 2-day summit, convening a Vermont biodiesel stakeholder meeting, and selecting several pilot project participants, VSJF will draft a strategic

‘road-map’ that would lead to the implementation of an SBA certification program in Vermont, provided Vermont biodiesel stakeholders deem 3rd party verification a feasible prospect. When VSJF submits this final project deliverable that lays out possible steps, best practices, risks, opportunities and a timeline, it will be in sync with the national agenda for sustainable biodiesel practices and will have benefited from the input of as wide an array of stakeholders as possible.

6. A Feasibility Study of a Mobile Unit for Processing Oilseed Crops and Producing Biodiesel in Vermont

Christopher W. Callahan, PE, Callahan Engineering, PLLC

Oilseed production in support of food, feed and fuel markets on Vermont farms shows great promise. One challenge is the distribution of necessary equipment to process the oilseeds into more useful forms; oil and meal. Some pioneering farms and groups have purchased oil presses and have constructed or purchased equipment to convert raw oil into biodiesel. But this is the exception. Most farmers will not assume the risk of both producing oilseed crops and attempting to convert them to oil and meal. Mobile processors are one way to enable this fledgling agricultural industry.

Oilseed Crops in Vermont

Oilseed crops such as sunflower, canola and soybeans contain relatively high amounts of vegetable oil in their seeds. This oil can be converted to a food commodity and can also be used as a fuel for diesel engines either as raw oil or after being converted to biodiesel. Additionally, after the oil is pressed from the seeds, solids remain which can be made into a high protein meal for use as livestock feed. Previous work has demonstrated the feasibility of oilseed crop production and the potential benefit of an oilseed industry in Vermont.

This previous work has concluded that oilseed crops can be feasibly produced in Vermont and that their production can be done sustainably (e.g. balancing feed, food, and fuel needs).

Certain equipment and services are required to support such an endeavor and they largely do not exist on most Vermont farms. Oil presses and biodiesel conversion systems are key components of oilseed production for food or fuel and represent a relatively large investment for a single farm. It is, therefore, unlikely that each farm will invest in such equipment for their sole use. This is particularly true when considering the very short period of time that such equipment would be used to provide the farm's fuel.

One solution to this problem is a centralized processing facility. Capital costs and logistics tend to be prohibitive challenges for an early stage oilseed industry like Vermont's. This is one case in which moving the equipment may be more feasible than moving the product. This study assumes portable equipment that can be "shared" among many farms. A mobile processor, sized to handle one farm at a time offers the advantage of lower capital costs and increased flexibility to respond to the processing market as it changes.

Mobile Processing of Oil Seeds

A business model has been developed to estimate the operating characteristics of a mobile processor. While this model has immediate value in determining feasibility, it also will have future value to entrepreneurs considering and planning for such a venture. The model has been built with flexibility to allow for future changes in prices and to allow for changes in the processor characteristics.

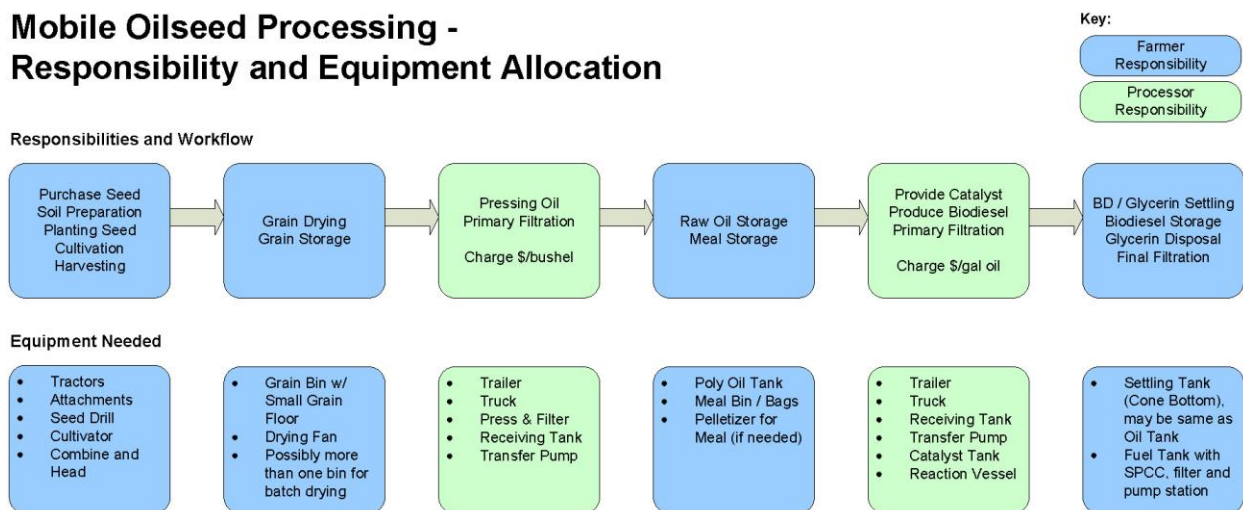
The business operation has been reviewed as (1) a stand along pressing operation, (2) a stand-alone biodiesel conversion operation and (3) a combined operation. Within each of these three

operations additional options have been considered. For example, both attended and unattended pressing operations were considered.

A list of the equipment required for each operation was generated and prices were estimated to establish initial capital (or fixed) costs. Operational (or variable) costs were estimated along with each operation’s capacity. This portion of the analysis led to the determination of the breakeven price for the operator.

Market value of the pressing and biodiesel conversion services is based on subtracting the market value of the end products from the farmer’s cost to produce dry grain. The farmer’s cost basis has been based on oilseed crop production costs and yields as well as capital investment costs which a farm would bear to enable mobile processing at their location (e.g. grain bins and driers).

Mobile Oilseed Processing - Responsibility and Equipment Allocation

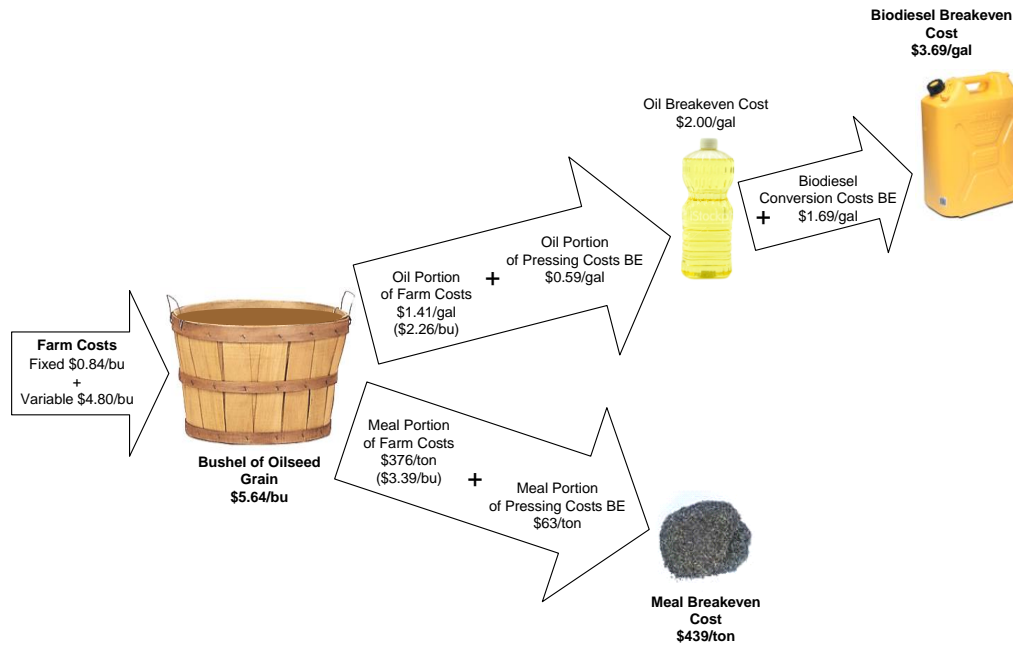


The approach to this study was to compare estimated costs of converting oilseeds to meal, oil and biodiesel with the market value of these products. Estimates of all the costs associated with processing oilseed into meal, oil and biodiesel have been included. Farmers’ costs are estimated along with costs associated with the mobile processor. Market values were assumed for diesel fuel (\$4.00/gal), organic meal (\$599/ton) and conventional meal (\$340/ton).

Modeling assessed (1) a stand-alone pressing operation, (2) a stand-alone biodiesel conversion operation and (3) a combined operation. Within each of these three operations additional options also have been considered. For example, both manual and automated pressing operations were considered and operations with both single and multiple biodiesel converting trailers were considered. Expenses were estimated for each operational model.

An example of the modeling results is shown below.

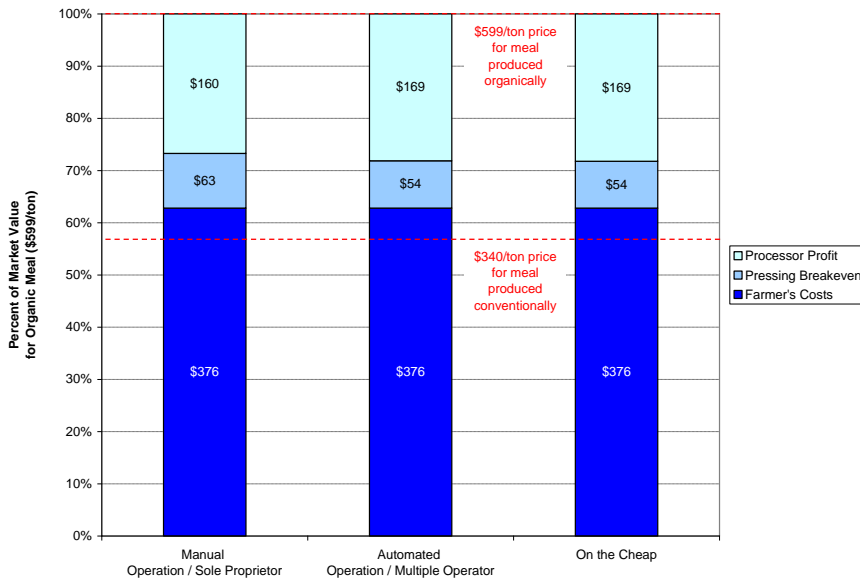
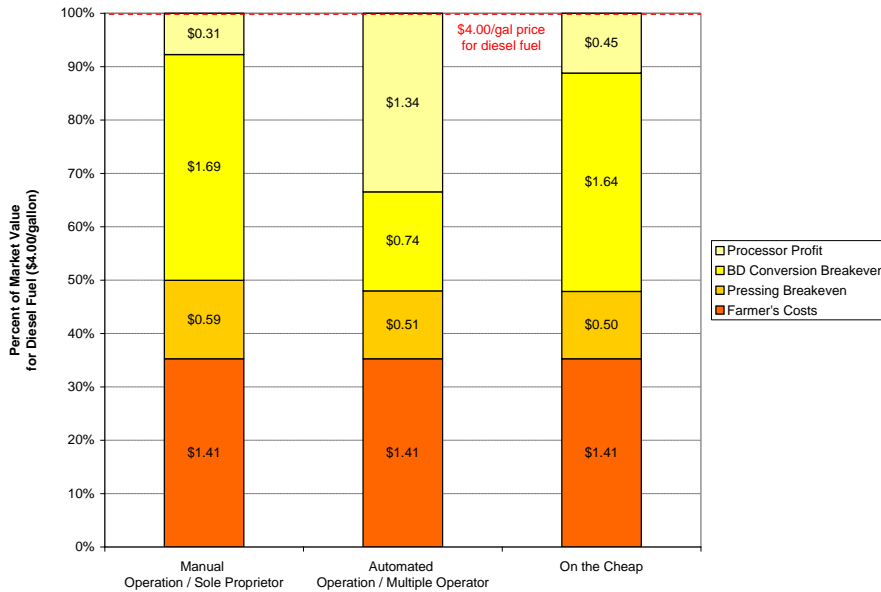
Figure 1: Oilseed to End Product Process Flow



This figure illustrates the breakeven costs of the two main outputs of oilseed processing; biodiesel fuel (\$3.69/gal) and meal (\$439/ton). This example shows the results for a typical farm using 3,000 gallons of fuel and a mobile processor which provides pressing and biodiesel conversion, pressing 48,000 bushels per year and converting 180,000 gallons of oil per year to biodiesel.

The farmer’s costs in this example are relatively high due to conservative assumptions for production costs (\$240/acre) and yield (1,500 lbs/acre). The processor’s costs are also relatively high due to it being a relatively low volume processor of biodiesel and, thus, paying more for methanol than a higher volume processor would. **In short, this model is feasible even with conservative assumptions**, and shows room for improvement.

A comparison of three combined service models is provided in the two graphs below. The first graph shows the value of converting oilseeds to either vegetable oil or biodiesel as fuel for the farm when compared with market value. The significantly lower cost of conversion for the automated/two operator model comes from lower methanol costs. The second graph shows the value of converting oilseeds to meal when compared with market value. A result of the conservative cost assumptions above is that the farmer’s cost of unprocessed grain exceeds the market value for conventional meal.



Conclusion

Mobile oilseed processing in Vermont is predicted to be a feasible and profitable opportunity based on the results of this study. It is technically feasible to transport appropriately sized equipment with a truck and small trailer to remote locations to provide processing services. It is also estimated that the cost of processing is below the market value of certain outputs (biodiesel and organic meal). A key challenge to such an operation will be establishing a sufficient initial market to breakeven at a reasonable price while also planning on future growth to capitalize on economies of higher volume production. As production volume increases, breakeven price will decrease and higher profit can be realized at the same market price. The early market for such an enterprise remains to be completely defined, but will likely be farmers with an interest in both fuel and organic feed from oilseed crops which they have grown themselves.

IV. Other Developments in Sustainable Agriculture

Cabot Sustainability Initiatives

Cabot Creamery Cooperative created the new position of Director of Sustainability in April 2008. Jed Davis was named to this role to coordinate Cabot's "farm-to-fork" sustainability efforts which engage both the cooperative's dairy farmers as well as Cabot's employees. The scope of Cabot's efforts extends from the co-op's dairy farms, to its creameries, right through to customers and consumers. "The principles of cooperation and ideals of sustainability are closely knit," notes Dr. Richard Stammer, Cabot's president, "and we are proud of our ongoing efforts to create social, economic and environmental opportunities."

Cabot is working with two key sustainability partners, one each on its farm and brand activities. The Manomet Center for Conservation Sciences (www.manomet.org) is developing a dairy agriculture scorecard to help dairy farmers assess their on-farm programs. This project is being conducted in conjunction with Agri-Mark and Dairy Management, Inc., a leading, national dairy industry group. Meanwhile, Mark McElroy, executive director of the Center for Sustainable Innovation (www.sustainableinnovation.org), is working with Cabot on a variety of efforts - carbon, water, waste reduction, etc. - related to Cabot's facilities and award-winning products.

Vermont Fresh Network

The Vermont Fresh Network's (VFN) mission is to develop solutions for Vermont farmers and chefs to market more locally grown food. In 2008, we facilitated programs for farmers, chefs and distributors to meet and discuss the logistics of scaling up the size of the Vermont local food system, the nuances of the local beef market, and distribution options. VFN also partnered with the Agency of Agriculture and the Specialty Food Producers Association to host a matchmaking event that brought together large scale purchasers with local farmers and food producers. The event focused on mobilizing conventional wholesale buyers to develop purchasing partnerships with local farmers. VFN and the Agency are continuing to track the relationships that developed through this event.

Vermont Fresh Network brings chefs and community members together to support a diversified, vibrant agricultural economy. We strive to inform and involve the consumer about the importance of preserving Vermont's working landscape through unique programs like the Farmers' Dinner Series, our Annual Forum. Our Farmers' Dinner Series has developed into an evening of consumer, farmer, and chef interaction that has engaged over 600 Vermonters from around the state. Our Annual Forum provided us a stage to celebrate the Vermont's food professionals. It is an evening in which consumers have the opportunity to taste the exceptional food grown in Vermont and converse with those that grow and cook it. The event brings together farmers, chefs, food producers, cheese makers, brewers, winemakers and consumers.

- In 2005, VFN chefs recorded an average expenditure of \$21,960 on local farm products.
- In 2006, VFN chefs recorded an average expenditure of \$55,417 on local farm products.
- In 2007, VFN chefs recorded an average expenditure of \$79,453 on local farm products.
- In 2008, VFN chefs recorded an average expenditure of \$88,384 on local farm products.

VFN continues to see an increase in local farm products purchased by our chefs. Although we are convinced that our program work and the strength of VFN's mission have positively affected this trend, it is not reasonable to take full credit for this jump in local purchase—a variety of factors, including national and regional attention, programs and events of other like-minded nonprofits and the Vermont Agency of Agriculture and energetic movements like the Localvores boost awareness and fuel individual interest. (The data is collect by a self reporting process.)

Vermont Sustainable Jobs Fund

The Vermont Sustainable Jobs Fund (VSJF) mission is to accelerate the development of Vermont's green economy. They work to develop new markets, and strengthen and transition existing markets toward sustainability through the use of early stage grant funding, technical assistance (including our Peer to Peer Collaborative business assistance program), and strategic partnerships.

One of their main areas of focus, the Vermont Biofuels Initiative (VBI), fosters the development of a sustainable and viable biomass-to-biofuels industry in Vermont that uses local resources to supply a portion of the state's energy needs. The VBI will help meet 25 percent of the state's energy needs from renewable sources by 2025 and is designed as a component of diversified, sustainable agriculture in Vermont. They are making investments in feasibility analyses, research and development, and demonstration projects for various biomass or biofuels feedstocks which are intended to lead to commercialization over a 7 year time horizon.

Overall Project Objectives:

1. To support the expansion of the supply of and demand for locally produced and commodity level biofuels in Vermont in order to reduce the state's dependency on petroleum;
2. To promote entrepreneurial activity in the emerging biofuels sector by providing grant funding and technical assistance to new businesses that can or will eventually create livable wage jobs;
3. To stimulate sustainable farm-based biofuels production efforts as a means of enhancing farm viability (reducing costs and/or increasing revenue) and local fuel security; and
4. To help educate the public about the benefits of sustainably and locally produced biofuels.

During 2009 and 2010, the VSJF will conduct several competitive grant rounds, which will distribute over \$650,000 in funding for innovative biodiesel, grass energy and algae related projects. With funding from the US Department of Energy (courtesy of the office US Senator Patrick Leahy), these projects will focus on developing renewable fuels for local use.

Vermont Technical College

Vermont Tech prepares students for careers in Agribusiness Management Technology and Dairy Farm Management Technology through hands-on education and training opportunities, real-time experience working on our campus farm, and a small school, small class-size focused learning environment. VTC has been experimenting with new approaches to agriculture, such as cover cropping the corn they grow. They tried this in 2008 and will successfully demonstrate implementation and economics.

Vital Communities

In the greater upper valley region of VT & NH, three employers tested a new employee wellness benefit that connected employees to farms, farmers, and fresh farm produce. The Tuck School of Business at Dartmouth College, Mascoma Savings Bank, and Mt. Ascutney Hospital in Windsor, offered their employees samples of fresh in-season produce from local farms, farmstand account set-up, group pick-your-own trips, access to information about local farms, and even a weekly produce delivery in the worksite parking lot. The project's evaluative report by Norris Cotton Cancer Center's behavioral researchers is due at the end of February.

The Valley Food & Farm program at Vital Communities designed this worksite wellness benefit service and is offering it for a second year to larger progressive businesses in the region. Its multiple goals include tying more people to farmers and encouraging folks to try new healthful foods. More information on the service is available: 802-291-9100 x103 or lisa@vitalcommunities.org.

Results of Valley Food & Farm's annual survey at the beginning of 2008¹:

- Consumers who responded reported that during 2007 they increased their spending on local farm products and services by a combined \$106,784, or \$890 per respondent.
- Of the 120 respondents, 30 people (25%) reported that their local food purchases increased by at least \$1500 for the year.
- Farmers separately claimed a sales increase of \$90,289, or \$4,299 per respondent.
- Consumers say that they spent an average of \$1764 on local farm products and services in 2007.
- Of farmers responding, 88% felt that the local community is more aware of local food and farming because of Vital Communities' Valley Food & Farm Program. Farmers indicated the most valuable services provided by Valley Food & Farm program are education and increasing consumers' awareness about local farms and farm products.
- There is a gap between consumers' reason for change and farmers' understanding of those reasons. For example, while more than half of our consumer respondents (42%, 57 respondents) say that our printed Guide helped them buy more food from local farmers, only 12% of the farmer respondents believe our Guide did that for them.

¹ Not a scientific survey; an electronic Zoomerang survey offered to self-selecting constituents of Valley Food & Farm and Vital Communities.

RAFFL

The Rutland Area Farm & Food Link (RAFFL) is furthering its regional projects and is currently in the process of funding and hiring for a new Executive Director position for 2009. In 2008, RAFFL implemented its pilot farm-to-school program in the Rutland region, with the support of VT FEED. RAFFL is continuing its land search for the establishment of a regional incubator farm, as well as working with local towns and agencies to plan and develop a food hub for the processing, storage, and distribution of local food products. RAFFL played an integral role in establishing the Rutland Winter Farmers' Market, the first Farmers' Market in the state to run for 52 consecutive weeks. RAFFL published and distributed its fourth Local Buying Guide for the region.

Green Mountain College

Green Mountain College's Farm & Food Project received a \$110,000 grant from the Jensen-Hinman Foundation to research, develop, and teach fossil-free agriculture methods and technology. The funds will be used to support research aimed at running the College's Cerridwen Farm with as few fossil-derived resources as possible, with the ultimate target of using no fossil fuels at all. Included in the funding is the completion of a working demonstration of most small-scale renewable energy systems available to farmers, including photovoltaic, wind, solar hot water, and passive solar systems. The College is also working with Chartwells Dining Services to procure 30% of its food locally by 2010.

Agency of Agriculture

2008 saw the introduction of several new initiatives at the Buy Local program, alongside continuation of previous projects such as price card and label distribution, event sponsorship, mini grants for local foods directories, advertising, and community outreach. New projects included:

- **Local Foods in State Government:** In 2007, the Vermont State Legislature requested that the VT Agency of Agriculture expand state government's use of local foods. Efforts in 2008 in pursuit of this goal included a working day in April, 2008, local foods matchmaker (see below), NECI intern placement at Woodside Juvenile Rehabilitation Center, and increased partnerships with the Department of Health. A separate full report on Local Foods in State Government progress is available.
- **Local Foods Matchmaker:** The VT Agency of Agriculture, Vermont Grocers' Association, Vermont Fresh Network and Vermont Hospitality Council hosted a matchmaker event that used a "speed dating" format to allow local producers to meet with, and pitch their product to, commercial buyers. A full outline of steps in hosting this event, with template materials, is available.
- **Taste of Place Workshops:** The VT Agency of Agriculture, Middlebury College and University of Vermont co-organized a two day workshop in November, 2008, that brought together experts from Vermont, France, Quebec and Canada to discuss options for developing place-based quality designations for unique food products. A report from the workshop will be available in mid-January.
- **National Eat Local Challenge:** Secretary of Agriculture Roger Allbee challenged his fellow agricultural commissioners to a day of localvore eating to highlight their states' local

foods and kick off National Farmers' Market Week. Secretary Allbee's day included farm tours, cooking demonstrations, and a 100% local dinner he prepared with his wife for a small group of Vermont food writers.

- **Invest Local Retreat:** While buying local goods has gained significant traction with Vermont consumers, the structures for average Vermonters to invest local is underdeveloped. An ad hoc group, with assistance from the VT Agency of Agriculture, explored this issue in 2008, leading to a Grafton Inn retreat to develop options for next steps. A report from the retreat is available.

Center for Sustainable Agriculture, University of Vermont Extension

Established in 1994, the Center for Sustainable Agriculture provides timely information to Vermont communities and the UVM campus. Our mission is to cultivate understanding and innovative practices and policies that advance sustainable food and farming in VT and beyond.

The Center and partners work to increase the production and accessibility of food to Vermonters through research directed by the Sustainable Agriculture Council, such as mapping farm stands and CSA distribution; marketing and outreach activities through the Pasture Program, including the annual Grass Fed Directory of Products and technical workshops on consumer education and safe food production; and Farm Enterprise Program efforts to address regional distribution challenges by providing assistance to the Intervale Food Hub project and assistance to farm businesses taking the next step to a higher level of production individually, and regionally through assistance to Rutland Area Farm and Food Link.

Each of the Center's activities contains at its root the need for farms to improve environmental conditions, rather than degrade them. On-farm renewable energy sources, building top soil, creating cleaner water and encouraging farm biodiversity are themes essential to sustainable agriculture. The Dairy Stewardship Alliance helps farms to assess multiple levels of farm health, including soil, water, energy and more. The Pasture Program's Winter Grazing Management⁴ project seeks to measure changes in soil condition through season-extending livestock grazing techniques. Additional SARE-funded projects working with horse owners and testing new forage species are seeking to measure and share improved management decisions. The Center's Community Biomass Project will support communities interested to develop locally sustainable wood biomass systems for heating, looking at examples of community supported firewood and wood pellets.

Northeast SARE 2008

University of Vermont Extension is the host institution for Northeast SARE – the Sustainable Agriculture Research and Education program of USDA – which makes grants to researchers, farmers, and agricultural service providers across 12 states and Washington D.C.

In 2008 Northeast SARE awarded \$1,555,961 for 18 Research and Education projects that will run for several years; the projects range from \$180,000 to test an interdisciplinary, wholefarm approach to managing blueberries to \$89,563 to education farmers about agritourism.

Northeast SARE also awarded \$429,212 to support 4 projects that train Cooperative Extension and other agricultural service providers. The 2008 projects range from \$169,425 for trainings on composting as an alternative method of managing livestock carcasses to \$52,517 to enhance understanding of high-tunnel design, construction, and use for season extension.

There were 14 Partnership grants awarded in 2008, aimed at service providers conducting projects on farms, for a total of \$125,116. These projects address a range of issues, from \$4,055 to test on-farm production of arbuscular mycorrhizal fungi, to \$9,997 to see if a new way of thinning Asian pears makes it a viable alternative crop in the Northeast.

Northeast SARE awarded \$190,523 in grants to 29 farmers in 2008 to conduct projects that explore improved stewardship, increased profits, and benefits through outreach to the wider farm community. Projects range from \$3,182 to continue a long-range study of grape root borer control to 10,000 to promote awareness of chevon, or goat meat, as a consumer option.

Vermont-based SARE grants in 2008 include: “Increasing Farm Profitability through Agritourism Product Development and Marketing” Lisa Chase, UVM Extension, \$89,563. “Focusing on Beginning Farmers” Beth Holtzman, UVM Extension, \$71,640. “Introducing Rice as a Commercial Crop to the Northeastern USA” Linda Akaogi, Putney VT, \$9,885. “Assessing the Value of Oilseed Meals for Soil Fertility and Weed Suppression” Heather Darby, UVM Extension, \$9,213. “Developing On-farm Research Expertise Among Farmers in Vermont” Wendy Sue Harper, NOFA-VT, \$9,997. “Eggplants as Habitat Plants in Poinsettias” Margaret Skinner, UVM Extension, \$9,993. “Vermont Food Basket Project” Travis Marcotte, Intervale Center, \$10,000.

For comprehensive information about Northeast SARE grants see: <http://nesare.org>

Vermont Farm Viability Enhancement Program

Since 2003, over 200 farms have completed business plans through the Vermont Farm Viability Enhancement Program. These farm businesses represent over 66,000 acres and employ more than 750 Vermonters. More than a third of enrolled farms are conserved and approximately one third are certified organic. In FY 2008, 44 farms completed business plans with the program – 21 are dairy farms, 14 of the farms grow vegetables, 12 produce maple sugar, and many are quite diversified in the agricultural products they produce, including everything from sheep, goats and rabbits to oilseed crops, berries, flowers, vegetable starts and mushrooms. Another ten farms were provided planning and technical assistance that resulted in cash flow analyses, enterprise analyses and federal grant applications to USDA Rural Vermont for energy efficiency and value-added producer grants. Sixteen percent of the participating farms process products directly on their farms such as cheese, yogurt, wine, sausage, soup or pickles!

In 2008 the Program provided implementation assistance and implementation grants to 27 farms that had previously completed a business plan with the Program. Implementation assistance included further business planning, financial analysis, and professional services to implement business plan projects, with funding through a Rural Business Enterprise Grant from the USDA Rural Development. Implementation grants ranging from \$2,000-5,000 were awarded to twelve farms for capital improvements and expenditures, with funding from the Argosy Foundation.

A new development for the Vermont Farm Viability Enhancement Program in 2009 includes the expansion of our implementation grants program. This grant opportunity will continue through a generous grant from the Castanea Foundation, and we plan to have competitive grants available in 2009 and 2010 to farmers for business plan implementation projects, as well as ag-related businesses that provide processing, distribution and marketing for Vermont agricultural products. The first round of funding is for meat processing projects, with a deadline in March 2009.

The Farm Viability Program was established at the Vermont Housing and Conservation Board in 2003 in collaboration with the Vermont Agency of Agriculture, Food and Markets. Since 2004 the Program has provided business planning services to between 45-55 farms each year. During the year-long process that culminates with the completion of a written business plan, program contractors offer in-depth financial analysis, assistance in goal setting, and analysis of the strengths, weaknesses and opportunities of the farm business. Targeted analysis is offered in specific cases for farm transfer planning, cash flow analysis or enterprise analysis.

Services are delivered to farmers on the farm, and are provided by VHCBC contractors or grantees such as the Intervale Center, Northeast Organic Farming Association–Vermont, the University of Vermont Extension Service, and Working Landscapes, Inc. Additional farm business consultants and technical specialists are contracted directly by VHCBC. The Vermont Small Business Development Center is another important partner, providing a variety of services through grantee organizations.

Food System Research Collaborative

In early 2009, the Center for Rural Studies at the University of Vermont will be bringing together the new Food System Research Collaborative. The primary goal of the Collaborative is to join on-campus and off-campus organizations in efforts to further food system research and enhance linkages to the work on the ground in Vermont and beyond. The University of Vermont has traditionally been engaged in teaching, research and outreach related to most of the components of the food system. The Center for Rural Studies, in particular, has performed research and outreach on farm-to-school initiatives, international policies and their affect on the U.S. food system, consumer behavior, on-farm energy use, farmer entrepreneurship and capacity-building, agriculture and local land use, and food security. Through its work, the Center has developed partnerships with many other food system organizations. The Food System Research Collaborative will continue in the partnership vein and provide for more direct and collaborative connections to the resources and knowledge at UVM and leverage the strengths of participating organizations toward research, grants, publications, and outreach.

V. Background on the Council

6 V.S.A. Chapter 209, Sustainable Agriculture Section 4701

§ 4701. Sustainable agriculture research and education program

(a) The purpose of this section is to promote research and education that will encourage the development and use of economically and ecologically sound sustainable agriculture practices such as organic methods, biological control, integrated pest management, soil improvement, cultivation, harvesting and irrigation techniques, and transportation and marketing innovations, through:

(1) The control of pests and diseases of agricultural importance through alternatives that reduce or eliminate the use of pesticides and petrochemicals.

(2) The production, processing and distribution of food and fiber in ways that consider the interactions among soils, plants, water, air, animals, tillage, machinery, labor, energy and transportation to enhance the viability of agricultural soils, public health and resource conservation.

(3) The expansion of marketing opportunities and promotion of products produced through the practice of sustainable agriculture which will encourage the purchase of Vermont grown foods and promote regional food security.

(4) The coordination of research and education activities on sustainable agriculture among private and public agencies and individuals within Vermont.

(b) A sustainable agriculture council is established, to be chaired by the secretary of agriculture, food and markets. The council shall include the commissioner of education and representatives, appointed by the secretary of agriculture, food and markets, of the college of agriculture at the University of Vermont, the extension service at the University of Vermont, Vermont Technical College and farm organizations, and a representative of the low input sustainable agriculture program of the United States Department of Agriculture. The council shall meet on call of the secretary and shall make recommendations regarding:

(1) Goals and priorities for ongoing public and private research of particular relevance to Vermont agriculture, and for the coordination of research and demonstration projects on sustainable agriculture.

(2) The dissemination of research results, the identification of future research needs and other useful information on sustainable agriculture.

(3) The use of state-owned lands, participating farmer managed land, and land owned by the University of Vermont and state colleges system for continuing research on sustainable agriculture practices.

(4) Techniques for financing the integration of sustainable agriculture practices into farming operations.

(5) The teaching of sustainable agriculture practices in schools at the elementary, secondary, and postsecondary levels.

(c) The secretary of agriculture, food and markets is authorized to apply for, accept and make use of grants from public and private sources to achieve the objectives of this section, in accordance with the provisions of 32 V.S.A. § 5. In awarding grants, preference shall be given to individuals, especially farmers, conducting on-farm research.

(d) By January 15, annually, the council shall prepare a report for distribution to participating organizations, the general assembly and the public summarizing developments in sustainable agriculture in Vermont and nationally. The report shall also make recommendations for future activities that will promote the objectives of this section. (Added 1989, No. 228 (Adj. Sess.), § 2; amended 2003, No. 42, § 2, eff. May 27, 2003.)

2007 Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING
Between the
UNIVERSITY OF VERMONT
And the
VERMONT AGENCY OF AGRICULTURE
With regard to implementation of
6 V.S.A. Chapter 209. Sustainable Agriculture
Section 4701. Sustainable Agriculture Research and Education Program

August 2007

Introduction

This memorandum of understanding updates and replaces a previous MOU signed in 2004 that describes the protocol for activities of the Sustainable Agriculture Council, which was established in statute by the Vermont legislature in 1990. *The purpose of the Council is to facilitate coordination and identify priorities for research, education and policies that support economically, socially and ecologically sustainable agricultural practices in Vermont.* The Council will take a forward-looking approach to supporting the long-term viability and vitality of Vermont's food and farming systems.

- 1) The Council will provide coordination among groups supporting stewardship of Vermont's farms and sustainable agriculture to identify clear roles and avoid duplication of efforts concerning research or education on themes that are relevant across member organizations.
- 2) The Council members will identify strategic priorities for the development of sustainable agriculture in Vermont.
- 3) The Council requires consistent and engaged leadership and management to maintain member commitment and focus. Whereas the mission of the UVM Center for Sustainable Agriculture, created in 1994, largely mirrors the purpose of 6 VSA Chapter 209 Section 4701, it is agreed that the Center will provide the day-to-day leadership and management of the Council, working closely with the members of the Council and the leadership required by statute.
- 4) The Council will facilitate activities that meet the Council's objectives. Toward that end, in furtherance of Section 4701 part C, the Secretary of the Agency of Agriculture, Food and Markets may have the Council secure grants, gifts, or state allocations. Funds may be used for services and activities provided by organizations or individuals, either Council members or external collaborators, according to procedures to be developed by the Council. Activities that may be funded through the Council shall be conducted by member's organizations of the Council, and not directly by the Council itself.

5) The Council needs a minimum level of resources committed to its management, information needs, staff support and operating expenses. Whereas UVM Extension commits to covering the salary of the Center's Director and partial operating costs of the Center, the Center's director and staff shall be responsible for arranging Council meetings, preparing meeting documents, taking and distributing meeting minutes, publishing and distributing reports, and following up on Council requests for information. In addition, the Center for Sustainable Agriculture and the Agency each agree to fund annual operating support, from existing resources, to the Council in the amount of \$7,500, for a total operating budget of \$15,000 to be deposited annually by October 1 into a UVM account holding only Council funds.

Structure of the Council

The Council will consist of the following standing members: the Secretary of Agriculture, the Dean of UVM Extension, the Dean of UVM-CALS, and the Director of the UVM Center for Sustainable Agriculture. In addition, there will be a representative from the Department of Education, Vermont Technical College, NOFA-VT, the USDA Northeast Sustainable Agriculture Research and Education program, other USDA agencies(s), farmers representing commodity or marketing associations, and representatives of non-governmental agricultural organizations. Individual members will be nominated and approved by the Council and appointed by the Secretary.

To maintain continuity of effort and streamline management of the Council, the Secretary of the Agency, or their designee and the Director of the UVM Center for Sustainable Agriculture shall be responsible for co-chairing the Council. The Council will be staffed by the UVM Center for Sustainable Agriculture, which will work with council members to: set meeting dates, develop meeting agenda, draft annual reports, and conduct public relations and outreach activities. The Center will arrange for meeting rooms, meals, audio visual equipment and other logistics as necessary. The Center will maintain the Council's records, including minutes of meetings, annual reports, and the membership mailing list. It will communicate with members in a timely fashion about Council activities and procedures.

A subset of the Council shall serve as the Council's operational committee and shall have the purpose of setting the Council's direction and themes for meetings. The committee will be nominated by the Co-chairs.

Regular member terms will be three years, staggered so that one-third of the Council rotates off every year.

Any member of the Council may nominate individuals to serve. Annually, the entire Council will vote in new members from the slate of nominees, with recommendations being forwarded to the Secretary for confirmation.

Members will serve on a volunteer basis and be subject to all customary terms and conditions of service of volunteer boards in the State of Vermont. Upon request, the Center will reimburse members for auto mileage at UVM rates.

Activities and Responsibilities of the Council

The Council will meet at least twice per year. Ad-hoc committees may be established that meet more frequently. The Council will review documents, publications and request presentations as it deems necessary to familiarize itself with issues, trends and existing programs.

The Council will develop a plan which sets priorities for the long term sustainability of Vermont's farms and their changing needs. The Council will establish and maintain a list of sustainable agriculture priorities with specific recommendations for action, to be reviewed annually and revised as necessary.

The Council may serve as an advisory body to member organizations with regard to sustainable agriculture research.

An annual report will be prepared by the Council and submitted by 15 January to the Vermont Legislature, the University of Vermont, and Council members, as required by statute. Specific issues may be selected for focus and elaboration in the annual report, with the goal of informing and advising the legislature, the public and the agricultural community.

This MOU will be reviewed by the Council, the Agency of Agriculture, the Center for Sustainable Agriculture, The University of Vermont College of Agriculture and Life Sciences, and University of Vermont Extension every five years to determine it's effectiveness at meeting the intent of the authorizing legislation.

Signed

Roger Allbee, Secretary
Vermont Agency of Agriculture, Food and Markets

Douglas Lantagne, Dean
University of Vermont Extension

Rachel Johnson, Dean
University of Vermont College of Agriculture and Life Sciences

2009 Vermont Sustainable Agriculture Council

Roger Allbee (S), Chair
Secretary, VT Agency of Agriculture
116 State Street – Drawer 20
Montpelier, VT 05620-2901
802-828-2430
roger.allbee@state.vt.us

Philip Ackerman-Leist (2005)
Green Mountain College
1 College Circle
Poultney, VT 05764
802-287-8254
ackermanleistp@greenmtn.edu

Brent Beidler (2006), Dairy farmer
Member, Vermont Grass Farmers Assn.
Beidler Family Farm
PO Box 124,
Randolph Center, VT 05061-0124
802-728-5601
bbeidler@innevi.com

Megan Camp (2005)
Vice President, Shelburne Farms
1611 Harbour Road
Shelburne, VT 05482
802-985-8686
mcamp@shelburnefarms.org

Ela Chapin (2009)
VT Farm Viability Enhancement Program
VT Housing and Conservation Program
58 E. State Street
Montpelier, VT 05667
802-828-2117
ela@vhcg.org

Jed Davis (2009)
Director of Sustainability
Cabot Creamery Cooperative
One Home Farm Way
Montpelier, VT 05602
802-371-1260
jdavis@cabotcheese.coop

Edward Delhagen (2007)
Verdana Ventures, LLC
PO Box 2
Randolph, VT 05060
802-498-3172 (c)
Verdana Ventures@verizon.net

Chris Dutton (S) (2005)
Vermont Technical College
PO Box 500
Randolph Center, VT 05061
802-728-1793
cdutton@vtc.edu

Ted Foster (2009)
Foster Brothers Farm Inc.
297 Lower Foote St.
Middlebury, VT 05753
802-388-1137 office
tdfoster@sover.net

Vern Grubinger (S)
Director, USDA- NE SARE
11 University Way, Suite 4
Brattleboro, VT 05301-3669
802-257-7967 x13
vernon.grubinger@uvm.edu

Gail Hall (S)
Department of Education
120 State Street
Montpelier, VT 05602
802-828-0156
gail.hall@state.vt.us

Lisa Johnson (2006)
Valley Food & Farm Director
Vital Communities
104 Railroad Row
White River Junction, VT 05001
802-291-9100x103
lisa@vitalcommunities.org

Ellen Kahler (2007)
Vermont Sustainable Jobs Fund
3 Pitkin Court, Ste. 301E
Montpelier, VT 05602
802-828-5320
ellen@vsjf.org

Doug Lantagne (S)
Dean and Director, UVM Extension
19 Roosevelt Hwy., Ste. 305
Colchester, VT 05446-5933
802-656-2990
doug.lantagne@uvm.edu

Jack Lazor (2007)
Butterworks Farm
421 Trumpass Road
Westfield, VT 05874
802-744-6855
butterworksfarm@pshift.com

Glenn McRae (2009)
Executive Director
Intervale Center
180 Intervale Rd.
Burlington, VT 05401
802-660-0440 x103
glenn@intervale.org

Allen Matthews (2007)
UVM Center for Sustainable Agriculture
106 High Point Center, Suite 300
Colchester, VT 05446
802-656-0037
allen.matthews@uvm.edu

Meghan Sheradin (2007)
Vermont Fresh Network
PO Box 895
Richmond, VT 05477
802-434-2000
meghan@vermontfresh.net

Will Stevens (2007)
Golden Russet Farm
1329 Lapham Bay Rd.
Shoreham, VT 05770
802-897-7031
wstevens@shoreham.net
Anson Tebbetts (S), Co-Chair
Deputy Secretary
VT Agency of Agriculture
116 State Street – Drawer 20
Montpelier, VT 05620-2901
(802) 828-2416
anson.tebbetts@state.vt.us

Ryan Torres (2009)
Philanthropic Advisor
The Vermont Community Foundation
3 Court Street
P.O. Box 30
Middlebury, VT 05753
802-388-3355 Ext 289
rtorres@vermontcf.org

Thomas Vogelmann (S)
Interim Dean,
UVM College of Ag. and Life Sciences
Dean's Office - Morrill Hall
Burlington VT 05405
802-656-0422
thomas.vogelmann@uvm.edu

Enid Wonnacott (2005)
Executive Director, Northeast Organic
Farming Association of Vermont
P.O. Box 697
Richmond, VT 05477
802-434-4122
enid@nofavt.org

Lini Wollenberg, (S) Co-chair
Director
UVM Center for Sustainable Agriculture
106 High Point Center, Suite 300
Colchester, VT 05446-8800
802-656 -9891
lini.wollenberg@uvm.edu

Jim Wood (2007)
Natural Resources Conservation Service
356 Mountain View Drive, Ste. 105
Colchester, VT 05446
802-951-6796
jim.wood@vt.usda.gov

Staff
Rebecca Haskell
UVM Center for Sustainable Agriculture
802-656-5459
Rebecca.Haskell@uvm.edu

