From the Director

November 2015

When we think about what sustainable agriculture means to Vermont, we see the farmers who invest heart and soul in the dynamic relationship between soil, water, healthy food, fair earnings, and a community of eaters. We see the simple and complex practices that are restoring and protecting precious farmland and keeping excess nutrients from our state’s waterways. We see the extraordinary work that community leaders engage in to assure that all people have access to healthy food, even those who might traditionally be thought of as vulnerable. We look to our colleagues who also work with farmers, and devote themselves to new opportunities and challenges while supporting strong traditions and values.

And we look to you, our community of friends, partners, and supporters, because we know that your involvement is rooted in a deep appreciation for the interconnectedness that makes Vermont agriculture and food systems inspirational for so many.

We’ve highlighted just a few of our areas of research and outreach in the 2014-2015 program year. Every one of them was made possible because of a whole network of donors, colleagues, partners, community leaders, farmers, and supporters who are interested in approaches to food and agriculture that are good for farmers, good for communities, and good to our precious soil and water resources. You can see our depiction of this network, our “ecosystem,” on pages 6 and 7 of this report.

We thank you for your involvement. Please let us know what you think, how we can be of help, and what you’d like to know more about.

Linda Berlin Ph.D., Director
(802) 656-0669, linda.berlin@uvm.edu

Juan Alvez, Ph.D., Pasture Program Technical Coordinator
(802)656-6116, jalvez@uvm.edu

Jennifer Brown, Budget Manager
(802) 656-3437, jennifer.brown@uvm.edu

Jennifer Colby M.S., Pasture Program Coordinator
(802) 656-0858, Jennifer.colby@uvm.edu

Joshua Faulkner, Ph.D., Farming & Climate Change Coordinator
(802)656-3495, joshua.faulkner@uvm.edu

Michelle Graziosi, ECO AmeriCorps Member
(since September 2015)

Kimberly Hagen M.S., Grazing Specialist
(802) 656-3834, kimberly.hagen@uvm.edu

Mary Haines, Student Employee
(since August 2015)

Cheryl Herrick, Outreach Support & Communications
(802) 656-5459, cheryl.herrick@uvm.edu

Suzy Hodgson M.S., Local Food Organizer
(802)656-4457, suzy.hodgson@uvm.edu

Liz Kenton, Youth Ag IDA Program Coordinator
(802) 656-9139, liz.kenton@uvm.edu

Ginger Nickerson, Ph.D., Good Agricultural Practices & Produce Safety Coordinator
(802) 656-5490, ginger.nickerson@uvm.edu

Ben Waterman, Land Access, New Farmer & New American Farmer Coordinator
(802) 656-9142, ben.waterman@uvm.edu

UVM Extension helps individuals and communities put research-based knowledge to work. Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. University of Vermont Extension, Burlington, Vermont. University of Vermont Extension, and U.S. Department of Agriculture, cooperating, offer education and employment to everyone without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or familial status.
“Keeping Vermont’s water clean is hugely important to us. **Clean water starts with healthy soil.** We are proud to raise grass-fed cattle while growing healthy soils with high organic matter. **This is eco-regenerative agriculture.**”

- *South Hero Farmer Eric Noel*

Well-managed pasture keeps water clean by continually building organic matter in the soil. What does that mean? It means land that’s able to absorb and hold onto water and nutrients instead of having them run off into nearby rivers, streams, and lakes. According to research\(^1\), rich **soil with 8% organic matter can absorb 85% of even an extreme weather event** like 5.5 inches of rain.

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**Pasture Program**

**Our vision:** Well-managed intensive grazing is the solar-powered intersection of profitable farming, robust ecosystems, and really good food. It represents everything that agriculture should be.

**Staff working on pasture-related research and outreach:**

- Jenn Colby
- Juan Alvez
- Kimberly Hagen
Produce Safety

Our vision: All Vermont’s commercial fruit and vegetable growers have written and implemented produce safety plans that help keep local food in local markets, improve farm efficiency, and ensure produce quality and safety by using practices that support ecological, social, and economic sustainability.

Staff working on Produce Safety:
- Ginger Nickerson

“The food safety workshop provided through Salvation Farms and UVM Extension was a valuable resource in terms of providing our Gleaning Program with the most relevant information necessary to safely handle food from harvest, to storage, to distribution.”
– Jessica Sanford, Gleaning Program Manager at the Intervale Center

Members of the Vermont Gleaning Collective gleaned 203,074 pounds of fresh produce\(^2\) that would otherwise likely have gone to waste and instead distributed it to local people and families after participating in a produce safety training with the Center for Sustainable Agriculture’s Ginger Nickerson.
"I can’t imagine surviving climate change in a bubble. Our greatest resource for planning and surviving is communicating with seed companies, growers, Extension services, knowing what’s happening in southern Vermont, in Massachusetts. What’s a problem for them this year will be a problem for us next year.” – Amanda Andrews, Tamarack Hollow Farm, as quoted in an interview for the Farming & Climate Change Adaptation blog

A recent research project on climate change resilience in Vermont found that 56% of farmers in the Missisquoi and Lamoille River watersheds make daily decisions in response to weather events.³ As extreme weather events increase in a changing climate, the impact of those decisions will become more significant for Vermont farmers, consumers, and communities.
Just like everything that's grown here, we are connected to a complex web of farms, community collaborators, students, policymakers - all helping to grow Vermont farms. Here's a look at the ecosystem.
The Center for Sustainable Agriculture is community, partners, supporters, researchers, and every single person who cares about farms and food. The system of the Center in 2015.
Food Access Research

Our vision: Barriers will be eliminated so that all who live in Vermont can gain access to healthy, locally or regionally produced food.

Center staff working on Food Access:

- Linda Berlin

In the 2015 program year, we documented the experiences of nearly 30 people about how resettled refugees accessed food in Vermont.

“We think of our existing measures of food security as objective, but they’re really not when we look across different cultures. What does a “balanced meal” mean to someone who grew up in a completely different culture? How can we provide the services that people can access if we don’t know how they’re defining their own needs?” - Center Director Linda Berlin, Ph.D.
New American Farmer Project

Our vision: Vermont’s resettled refugee and immigrant farmers will have access to the resources they need to become proud members of Vermont’s food system, and continue rich farming legacies that are common threads between their new cultural home and that of their homeland.

Center staff working with New American farmers:

- Ben Waterman

“I explain how and when to plant and how to prepare the soil. I teach my whole family how to grow the vegetables and I explain to them which are good in traditional ways and which are good for health.” – New American Farmer Indra Khadka, as quoted in the “Global Food, Local Food Guide,” co-published by the Center for Sustainable Agriculture and by the Association for Africans Living in Vermont in 2015

In the 2015 growing season, New American farmers and gardeners working with the Center and our partners produced approximately 7.5 tons of produce to feed their families and their neighbors, and to sell to local markets and restaurants.
About the Center’s Funding

- **Extension Funding** is a combination of federal and state dollars that UVM receives as a land-grant University.

- **Grants** are from government sources and private foundations. This section of the chart is proportionately larger than usual because all of the income from two multi-year grants are accounted for in FY15.

- **Endowment** income is the interest that is earned from generous donations made to the Center by donors who wanted to ensure that important work can continue in perpetuity.

- **Gifts** are donations to the Center’s annual fundraising appeals, or those made spontaneously.

Understanding the Center’s Expenses

- **Pasture** represents salaries and program costs for the Center’s largest program, with three staffers who engage in research, outreach, collaboration and technical assistance with farmers around the state.

- **Administrative & Communications** monies support leadership, collaboration, development, grants management, financial oversight, support for program staff, outreach and customer service, and allow us to produce the Center’s newsletters, calendars and annual report.

- **Food Safety** allowed the Produce Safety Coordinator to help farmers develop and follow plans for safe handling of their on-farm produce, including important work around new regulations.

- **New Farmer** expenses supported work in the areas of Land Access, Youth Ag. IDA, and New American Farmer, and projects including the Global Food, Local Food Guide.

- **Food Access** funding made it possible to research Vermont’s market and capacity for locally grown dried beans, and research how people are accessing healthy food.

- **Climate Change** expenses represent the research, outreach, publications, collaborations, and technical assistance provided through the Farming & Climate Change program.

- **Miscellaneous Projects** included our work supporting the Sustainable Agriculture Council, and the wrap-up of work on previous grant projects.
Pasture Program (pg. 3)

Pictured: South Hero, Vermont farmer Eric Noel showing soil in one of the pastures on his beef farm near the shore of Lake Champlain.

1 According to Missouri NRCS Soil Health Conservationist Doug Peterson: the capacity of well-managed pasture to absorb water and nutrients increases dramatically with increased soil organic matter. See his slideshow for Missouri State Extension at http://extension.missouri.edu/sare/documents/soilhealth.pdf. For more information about how soil health and water quality are inextricably linked, see the Pasture Management & Water Quality fact sheet at http://www.uvm.edu/~susagctr/resources/FactSheets/WaterQualityFS030413.pdf.

Produce Safety (pg. 4)

Pictured: UVM’s Slow Food Club members join Salvation Farms for a day of gleaning apples at Yates Family Orchard resulting in more than 8,000 pounds of quality apples being kept from going to waste.

2 Theresa Snow of Salvation Farms helped estimate that the Vermont Gleaning Collective (a network of professionally organized community-based gleaning programs) was able to redirect over 200,000 pounds of Vermont farm surplus after participating in a produce safety training with Produce Safety Coordinator Ginger Nickerson. For more information on Salvation Farms and gleaning in Vermont, visit http://salvationfarms.org/. Learn more about the Center’s Produce Safety work at http://www.uvm.edu/~susagctr/?Page=whatwedo/producesafety/GAPsabout.html.

Farming and Climate Change (pg. 5)

Pictured: By researching what’s happening in the ground on this Vermont dairy farm and seven other farms, our Farming & Climate Change team is exploring what practices build soil and water quality) and improve climate change resilience.

3 Here we cite Rachel Schattman, Ph.D.’s Climate Change Resilience on Vermont Farms: A Research Report for Service Providers, which you can find at http://www.uvm.edu/~agroecol/SchattmanREtAl_ClimateChangeVT FARmsARLG%20Res%20Brief%20202_2014.pdf. A key finding of her report is that Vermont farmers rely on best management practices to reduce risk in their farm businesses. Some of these practices are useful in limiting farm-scale risks producers may face because of climate change.

Food Access (p.8)

Pictured: Center Director Linda Berlin with UVM Food Systems Graduate Student Hannah Stokes.

4 The interviews referenced here are part of a broader research project to help determine what food security means for New Americans, with an eye towards adjusting policy and programs to make sure that they’re accessible and effective in meeting needs. For more information, contact Linda Berlin at linda.berlin@uvm.edu.

New American Farmer Project (pg. 9)

Pictured: Janine Ndagijimana, a New American Farmer, with a sample from her eggplant harvest. Janine and her African Eggplant were a prominent part of the 2015 events announcing the publication of the “Global Food” guide.

5 The Center partners with AALV to offer marketing and production assistance directly to ten farmers through enterprise training, and general food production and gardening education to 50 people through the gardener and food security components. Learn more about this work by visiting http://www.uvm.edu/~susagctr/?Page=whatwedo/landaccess/NewFarmsNewAm.html.
The UVM Extension Center for Sustainable Agriculture cultivates partnerships, supports innovative research and practices, and informs policy to advance sustainable food and farming systems.

We hope you enjoy our 2015 Annual Report as a look at some of our recent work for Vermont’s farmers, communities, service providers, and soil and water resources.