A Message from the Director

During the past few months, the Center’s staff have been participating in a process designed to help us think deeply about who we are as a team, and why sustainable agriculture work is near and dear to our hearts. The “why,” “what” and “how” of our work has certainly shifted somewhat over time, but the essence remains the same: we all share a love of the land and of farming that includes a commitment to the pillars of agricultural sustainability, including the maintenance or improvement of the physical environment, social factors and financial viability.

Sometimes it is good to go back to our roots, take stock of where we’ve been, and reconsider the path we’re on. A good example of our roots and an enduring commitment to sustainability is the Center’s Pasture Program. Over two decades ago we initiated this program because some smart people knew that raising animals on pasture was good for them (the animals) and good for us (the farmers and consumers). Our resolve about and commitment to this method of farming has only strengthened over time. And so has the way that we do our work; i.e., the “how.” We approach this work by seeking to build trust and relationships while we re-examine perceptions, learning, leading, sharing knowledge, asking questions, and addressing access to resources in an equitable way.

These approaches are what the staff at the Center agree have the greatest chance of leading to success. And these are the same approaches that we use in our other content areas, whether we are exploring irrigation strategies to provide the best advice for farmers in this changing climate, or supporting beginning farmers to have a productive growing season.

When it comes right down to it, a thriving farm and food system might be made up of nearly countless interactions between individual farmers, families, communities, land, plants and animals. At the Center for Sustainable Agriculture, our work focuses on trying to understand the ones that seem most critical to our current Vermont context.

The Center staff and I welcome your comments, thoughts and questions.

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Director
Center for Sustainable Agriculture

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The Who Farms? Project is a partnership among the Center for Sustainable Ag, UVM Humanities Center, the Vermont Folklife Center, Vermont Farm to School Network and the Vermont Historical Society. Together, we are building humanities communities through a learning project which will enrich our shared understanding of who farms in Vermont - and the context in which these farmers do their work. Thanks in part to funding from the National Endowment for the Humanities.

How can we work in partnership to develop a broader picture of who is farming in Vermont?

What we are learning and sharing:
1. The first year of the project was spent building relationships among the partners, recruiting a diverse advisory council, and beginning to reach out to Vermonters farming in different contexts.
2. As a partner group with diverse pedagogical backgrounds and experiences, we’ve developed an approach and orientation for sharing stories in ways which recognize differences of identity, experience and privilege - and have begun to engage in that plan.
3. The Center is nurturing partnerships with the team who will ultimately create the output of digital stories, graphic narratives, teaching resources and community gatherings.

More at: go.uvm.edu/whofarms
Research: Enhancing Grass Farming Research and Education

Research consistently shows that allowing livestock to graze on fresh pastures is THE most economical way to convert solar energy into protein and fiber. We also know that hay and supplementation are often a producer’s largest expenses. By deepening our understanding of the costs and benefits of the specific practices and relationships that are at the heart of successful pasture-based farming, we can support farmers, communities, animal health and welfare, and the natural environment we share.

How can cover crops contribute to soil health and pasture-forage ecosystems supporting production of high-quality grass-fed beef?

What we’re learning and sharing:
1. "Cocktail" cover crops can help a farm’s ecosystems build health across a number of dimensions: covering bare soil, building soil organic matter, addressing compaction, supporting biodiversity and providing nutritious forage for livestock.
2. Goals can sometimes be in competition. For example, in one situation we had to compromise on soil health objectives by first breaking up the sod to help get plants established for growth through the season.
3. The mixes we tested successfully maintained growth and productivity through the summer period; even when warm season mixes slowed down, the cool-season plants in the mix were also growing.

More at: go.uvm.edu/enhancingresearch
Outreach: Water Quality in the Connecticut River Watershed & Long Island Sound

The Center and other UVM Extension partners are in the third year of a five-year, six-state collaborative initiative (Long Island Sound Watershed Resource Conservation Partnership Program OR LISW-RCPP) to address the quality of the water that flows into the Long Island Sound. The Center’s role is working with farmers in the Vermont/New Hampshire Connecticut River watershed who grow vegetables, raise livestock, keep horses, or practice any other type of farming. **Thanks in part to USDA NRCS EQIP technical assistance funds.**

**Can we impact a whole watershed’s water quality by addressing production and financial issues at the farm level?**

**We are learning and sharing:**
1. Collaboration means we can get more done; however, the complex work of growing partnerships takes time.
2. Having enough staff dedicated to the project has helped reach more farmers. With partners and the help of a dedicated agronomy specialist, Laura Johnson, working in Vermont and New Hampshire, we reached 110 farmers and through individual assistance and group workshops.

**More at:** go.uvm.edu/CONNECTICUTRIVER
How to enable access to culturally appropriate food for New American farmers and gardeners?

With the Burlington area home to thousands of resettled refugees, many of whom have farming and gardening backgrounds, the Center and project partners realized that focusing on building knowledge and access to resources could go a long way towards improved food security throughout the community of new Americans living in Vermont. Thanks in part to funding from the U.S. Department of Health and Human Services Office of Refugee Resettlement.

How we are accomplishing this:
1. Continuing to partner with Association of Africans Living In Vermont (www.aalv-vt.org) and the UVM Extension Expanded Food and Nutrition Education Program (www.uvm.edu/extension/efnep) to help resettled refugee farmers and gardeners implement practices which extend the growing season and increase production of healthy food.
2. Respecting the deep knowledge and experience that these farmers have brought to Vermont.
3. Sharing resources and knowledge in ways that are accessible. With assistance from Across the Fence, Ben and partners released the video “Season Extension for Farmers and Gardeners in Cold Climates” in Nepali, Swahili, and English. The team supports access to needed resources, technical assistance, and equipment through relationships with the UVM Extension Master Gardener Program and Gardener’s Supply Company.
4. Help adjusting to the different cultural life in Vermont which involves unique ways of sharing resources and working within local systems to achieve work goals.

More at: go.uvm.edu/new-american-farmer
THESE FOLKS ARE ACCUSTOMED TO GROWING THEIR OWN FOOD AS A WAY OF SAVING MONEY, BUILDING A SENSE OF COMMUNITY, PARTAKING IN HEALTHY EXERCISE AND LIFESTYLE AND SUPPLYING THE HOUSEHOLD WITH CULTURALLY IMPORTANT FOOD.

BUT THEY’RE FACED, AS ARE ALL ASPIRING LOCAL FARMERS, WITH A LACK OF SPACE FOR GARDENING AND FARMING LOCALLY.

—BEN WATERMAN PROJECT COORDINATOR NEW AMERICAN FARMER
Compacted soils limit a farm’s productivity, and can cause negative impacts on soil health and water quality. This soil condition results in poor drainage, increased runoff, reduced soil aeration, and decreased root penetration accompanied by subsequent plant access to available soil moisture.

Compaction is a common problem on many farms, especially in cool, humid regions of the country which experience relatively short growing seasons (like the Northeast). The combination of climate change and shorter intense periods of rainfall makes this an increasingly common problem. Compaction research focused on comparing effectiveness of different cover crops (including tillage radish) and keyline plowing to break up impacted soil. Thanks in part to funding from USDA Conservation Innovation Grants.

What practices work best to alleviate compaction of Vermont’s clay soils?

What we’re learning and sharing:
1. There are situations where mechanical means are more effective than biological solutions for alleviating compaction (and vice versa).
2. Effectiveness of all alleviation methods is likely impacted by timing of operations (i.e., planting and plowing).
3. Other benefits of particular forage species (e.g., biomass production) should be considered, even if their ability to alleviate compaction is not significantly greater.

More at: go.uvm.edu/fccadaptation
Local Foods

Farm to School Case Studies Project

As part of her local food research, Center Director Linda Berlin worked with NOFA-VT and the Vermont Farm to School Network to conduct a series of case studies about schools which have implemented farm-to-school activities. Schools and organizations in Bennington, Fairfax, Hardwick, Milton and Putney were featured because of their different approaches to incorporating local agriculture into school communities.

Can we help increase local purchasing and access to all the benefits of farm-to-school activities by sharing stories and lessons more broadly?

What we’re learning and sharing:
1. Farm-to-school activities benefit students, school communities and farmers in varied ways: some focus on cafeteria food, others implement hands-on active learning, and some use local food as a community-builder. A number incorporate all of the above, and others have a completely different approach. However, the unifying factor is the focus on LOCAL.
2. Previous research shows that not only does participating in Farm to School feel good, but it helps Vermont’s bottom line.

More at: www.vermontfarmtoschool.org/2018-vermont-farm-school-case-studies

Students and communities benefit from being connected with local farmers and local food.

Profiles of how other schools benefit – and deal with challenges – can provide inspiration and a road map for those considering the possibilities.

-Linda Berlin, Director

Every dollar spent on local purchasing has a multiplying effect, resulting in an additional $.60 spent in the local economy.

Photo: Karen Gowen
Economic Case Studies of Climate Change Adaptation Practices

As Vermont farmers seek to remain viable and in ecological balance under changing conditions, it becomes increasingly important to understand what practices can help - and what the associated costs are. The Farming and Climate Change program staff have partnered with the U.S. Department of Agriculture (USDA) Northeast Climate Hub to build capacity and deliver science-based knowledge and practical information through economic case studies.

What are the benefits and the costs of implementing climate adaptation practices on northeastern farms?

What we are learning and sharing:
1. Through a partnership with the Burlington-based Intervale Center and the Climate Hub, the Center researched and published Benefits of Irrigation: Intervale Community Farm. This study revealed that even in overall wet years, installation and operation costs of irrigation infrastructure are worth it for high-value crops like vegetables. The costs are outweighed by maintaining plant growth and producing yields that would be reduced by a lack of water during short dry critical periods.
2. Collaborating with Last Resort Farm (Bristol, Vermont) and the Climate Hub, the Center researched and published Economics of Gully Erosion and Stabilization: Last Resort Farm. This report evaluates the costs and benefits of approaches which can help address flood, soil erosion and nutrient runoff events. Using methods detailed in the study, even low estimates of climate-related increase in extreme weather events show quantifiable benefits to farmers and communities. This study also demonstrated the important role conservation agencies have in closing the gap between private benefits to the farmer and public benefits (e.g., improved water quality) to communities.
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.

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 fund raising appeals, or those made spontaneously.

Other monies are received through the sale of books, videos, DVDs, and event registration.

Understanding the Center’s Expenses

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

Administrative & Communications monies supported 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.

New Farmer expenses supported work in the areas of Land Access, Youth Ag IDA, and New American Farmer projects.

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

Miscellaneous Projects included work on food access, local food, and other projects.