



Dairy Sustainability: Climate, Soil, Water

Join UVM Extension, Cornell PRO-DAIRY, and the Champlain Valley Farmer Coalition for this free workshop on dairy sustainability and the latest water, soil, and climate research. Workshop highlights include climate and environmental leadership, whole farm environmental assessments, managing enteric emissions, climate-smart manure management, building sustainability and resiliency in our dairy cropping systems, and Vermont resources and policy.

Wednesday, April 10, 2024 8:30 a.m. – 3:30 p.m. American Legion Post 27, 49 Wilson Road, Middlebury, VT 05753

Speakers include:

- **Abby Augarten**, UVM Extension Agronomy Outreach Specialist
- **Karl Czymmek**, PRO-DAIRY Climate Leadership Specialist
- **Dr. Heather Darby**, UVM Extension Agronomy & Soil Specialist
- **Dr. Joshua Faulkner**, UVM Extension Research Associate Professor
- **Dr. Quirine Ketterings**, Cornell CALS Professor of Nutrient Management
- **Joe Lawrence**, PRO-DAIRY Forage Systems Specialist
- **Vijay Nazareth**, Champlain Valley Farmer Coalition Executive Director
- **Dr. Jason Oliver**, PRO-DAIRY Biosystems Engineer
- **Dr. Tom Overton**, Cornell Animal Science Chair, Professor, and PRO-DAIRY Director
- **Ryan Patch**, VAAFM Agriculture Climate & Land Use Policy Manager
- **Lauren Ray**, PRO-DAIRY Ag Sustainability & Energy Engineer
- **Kirsten Workman**, PRO-DAIRY Nutrient Management & Environmental Sustainability Specialist



CHAMPLAIN VALLEY
FARMER COALITION INC.



Please register online by Monday April 8 at <https://go.uvm.edu/dairysustainability> or using the QR code below. If you cannot register online or have questions about your registration, please call the UVM Non-Credit Registration Office at 802-656-8407.

For program questions, contact Abby Augarten at 802-656-7544 or abigail.augarten@uvm.edu.

To request a disability-related accommodation to participate in this program, please call or email Karen Gallott 802-656-7540 or karen.gallott@uvm.edu by Wednesday, March 20, 2024 so we may assist you.



REGISTRATION

<https://go.uvm.edu/dairysustainability>

DAIRY SUSTAINABILITY: CLIMATE, SOIL, WATER

Agenda

8:30 a.m.	Check-in & Refreshments
9:00	Welcome & Introductions — Vijay Nazareth
9:15	Climate & Environmental Leadership in the Northeast — Karl Czymmek & Ryan Patch What is dairy's impact on GHG/Climate? Why is it important to NE dairy producers? What are the goals/targets we are tasked to try and meet? How will we get there? What are the markets and strategies available for farms to benefit from financially?
10:00	Value of Whole Farm Environmental Assessments — Quirine Ketterings & Kirsten Workman Sharing work done with N.Y. and Vt. dairies to conduct and evaluate sustainability assessments using Cornell's Nutrient Mass Balance tool and the greenhouse gas, water, and biodiversity assessments in Cool Farm Tool®. See what we have learned from using these tools and what the potential value is for you to use them on your farm.
10:45	Nutrient Efficiency & Other Strategies for Managing Enteric Emissions & Production Efficiency in Dairy Cattle — Tom Overton What are enteric methane emissions? What impacts enteric emissions? What are the current strategies we can employ to reduce emissions? What is on the horizon?
11:15	Environmental & Economic Considerations for Climate Smart Manure Management Practices — Jason Oliver & Lauren Ray Manure's role in GHG emissions, storage and treatment options, and data collected so far. Manure-to-energy projects, assessing the right fit for your farm, and understanding the associated carbon markets and financial agreements that may come into play with these projects.
Noon	LUNCH & Conversation

CROPPING SYSTEMS SUPER SESSION

12:45 p.m.	Soil Health: The Framework for Sustainability — Abby Augarten Lots of progress has been made in improving and protecting Vermont's soil health. What have we gained so far and what are the co-benefits for soil, climate, and water?
1:00	Dairy Soil Water Regeneration & Conservation Effects Assessment Project Updates — Joshua Faulkner, Quirine Ketterings, & Kirsten Workman As part of the Dairy Net Zero Initiative, UVM Extension and Cornell have been assessing soil health management systems compared to "business as usual" in dairy cropping systems for GHG emissions, yield and forage quality and soil health. In addition, the CEAP project has been overlaid on one of these fields to quantify water quality impacts. Hear about the project's preliminary results from the Northeast region.
1:30	Managing Nitrogen in Northeast Corn & Hay Cropping Systems — Heather Darby & Quirine Ketterings Nitrogen is complicated! How can we manage nitrogen on the farm to be efficient, and reduce losses and GHG emissions? There are many decisions to be made when it comes to N and there are often tradeoffs to be aware of. We will focus on manure management, but include how this also impacts our fertilizer management strategies.
2:00	Growing & Storing Field & Forage Crops In a Changing Climate — Joe Lawrence & Heather Darby What have the N.Y./Vt. forage crop trials shown us about growing forages in the Northeast? How do we manage forages to consistently meet farm feed goals in an increasingly unpredictable climate? Matching crop management — growing, harvesting, storing — with climate resources and herd goals.
2:45	Vermont Resources & Policy — Ryan Patch Vermont has strategic climate goals and policy. How do these impact your farm and what resources are available locally to help Vermont dairies reach those goals while also becoming more resilient in the face of more and more challenging growing conditions?
3:15	Adjourn & Next steps — Karl Czymmek