North American Center
NA Saffron * NA Saffron * NA Saffron *
For Saffron Research & Development

Entomology Research Laboratory and
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The University of Vermont

27 October 2020

Kirk Dombrowski, Ph.D., Vice President for Research
Dan Harvey, Director of Operations
University of Vermont
Office of the Vice President of Research
Core Facilities Committee
85 South Prospect St., 330 Waterman Building
Burlington, VT 05405

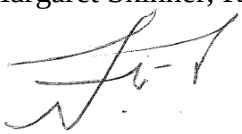
Dear Sirs;

This letter is written in support of the application of Dr. Terence Bradshaw to the OVPR Core Facilities Infrastructure Program for upgrades to the irrigation system at the Horticulture Research and Education Center. We have three research projects located at the HREC; two funded by the US Department of Agriculture on saffron and one by a South Korean University on insect pests of onions. This agricultural research directly benefits small family farms in Vermont and beyond by developing new high-value crops to generate revenues and effective pest management strategies to reduce reliance on chemical pesticides and increase crop yield. To obtain sound research results from these projects, it is essential that the test plants are maintained under conditions that promote healthy growth. These projects rely on the HREC trickle irrigation system for producing our target crops. Given the extreme heat and drought conditions in recent years, it is critical that a reliable water source for irrigation be available. The upgrades that Dr. Bradshaw proposes will definitely help to provide the water needed to conduct this research.

Sincerely yours,

Bruce L. Parker, Professor

Margaret Skinner, Research Professor



Arash Ghalehgolabbehbahani, Research Associate

THE UNIVERSITY OF VERMONT
AGRICULTURE & LIFE SCIENCES

Plant and Soil Science Department
University of Vermont
117 Jeffords Hall
63 Carrigan Drive
Burlington VT 05405

Dear Core Facilities Committee,

We are writing to you to bring attention to and highlight the pivotal role that the Horticultural Research and Education Center (HREC) plays in support of our research team's work. For the past 10 years, we have conducted numerous field trials at the HREC. Provided the versatility and sheer size of the farm's working landscape, the HREC has afforded us the opportunity to develop field experiments that would otherwise be unfeasible on smaller local commercial farms. Because much of our research involves highly mobile insects, establishing experimentally independent units is generally a limiting factor for our experimental design and often requires large distances (>250m) between our experimental treatments. Furthermore, our individual experimental plots are typically unique in their design and do not fit into a conventional field layout.

In recent years, the limited irrigation system on the farm has precluded us from executing more ambitious larger scale experiments and has reduced the potential for greater experimental replication within our current projects, subsequently reducing the statistical power of our field trials. Despite extensive efforts from the dedicated HREC staff to accommodate our projects, we are consistently limited by the modest irrigation system.

Funding dedicated to the expansion and/or updating of the current HREC irrigation would pay great dividends for researchers like us and would also expand opportunities for research collaborations within CALSX.

Sincerely,

Victor Izzo & Scott Lewins

Vermont Entomology & Participatory Action Research Team (VEPART)

Victor Izzo, PhD
Lecturer & Educational Coordinator (ALC)
Vermont Entomology & Participatory Action Research Team (VEPART)
Agroecology and Livelihoods Collaborative
Department of Plant and Soil Science & Environmental Studies
http://www.uvm.edu/agroecology/vic-izzo-ph-d/

Scott A. Lewins
Entomology Extension Educator -
UVM Extension NW Crops and Soils Program
Co-founder - Vermont Entomology & Participatory Action Research Team
Extension Coordinator -
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120 Marsh Life Science Bldg
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Burlington, VT 05405
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25 October 2020

Office for the Vice President of Research
Core Facilities Committee
University of Vermont
Burlington, VT 05405

Dear Core Facilities Committee Members,

I am writing in support of Dr. Terry Bradshaw's request for funds to replace pumps and filters for the irrigation system at the UVM Horticulture Research and Education Center.

I have conducted NSF-sponsored research at the HREC since 2018. Last year, storm water caused massive erosion from the outflow of a pond which then eliminated the irrigation system our project relied on. I teamed up with an adjacent project and together we purchased a new pump to serve our project from another small pond near to the site. Staff of the HREC installed the new system, hooked it up to existing irrigation pipes, and maintained the system throughout the summer for our use.

It is imperative to have reliable irrigation and the past extraordinarily dry summer was a prime example of that. Without the irrigation system of the HREC, we would have lost 380 highbush blueberry plants and our NSF-sponsored research would have completely failed. The irrigation system at the HREC is in dire need of upgrading, and I fully support Terry Bradshaw's request for Core Facilities Infrastructure funds for the upgrade.

Respectfully yours,

Alison K. Brody, Professor
Biology Department
University of Vermont
Burlington, VT 05405

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Email: akbrody@uvm.edu

The University of Vermont

October 28, 2020

Office of the Vice President for Research
University of Vermont
85 South Prospect Street
330 Waterman Building
Burlington, VT 05405

Dear OVPR Core Facilities Committee,

I am writing to express my enthusiastic support for the Core Facilities Infrastructure Upgrade proposal submitted by Dr. Terry Bradshaw and the UVM Horticulture Research and Education Center (HREC).

The focus of my Extension program and my applied research is climate change and agriculture, and more specifically, water management. While Vermont is indeed dealing with increased annual precipitation, the patterns of precipitation are also shifting and drought during the growing season is becoming more prevalent. This is also evidenced by a significant spike in interest and requests for irrigation technical assistance by Vermont's vegetable and fruit growers.

Irrigation was previously thought to be 'optional' in Vermont, but that is no longer the case. It is essential if a specialty crop producer is to remain financially viable. Given this, I believe it is necessary that HREC upgrade their irrigation system so that more research and education can occur at this important facility related to improved water management. I currently use the HREC for a multi-year research project focused on improved irrigation scheduling, and an upgrade in their current system would help ensure that we can continue and expand on this research to other crops and other research questions. It is also imperative that UVM's research farm serve as a demonstration for Vermont's growers, by investing in needed infrastructure and technology that will be critical to resilience to current and future challenges posed by climate change.

Sincerely,

Joshua Faulkner, Ph.D.
Research Assistant Professor
Farming & Climate Change Program Coordinator
UVM Center for Sustainable Agriculture
802-656-3495
joshua.faulkner@uvm.edu

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Department of Plant and Soil Science

Office of the Vice President for Research

Core Facilities Committee

University of Vermont

Dear Office for the Vice President of Research Core Facilities Committee,

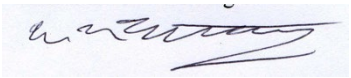
I write to support the proposal from Terence Bradshaw to improve the irrigation at the UVM Horticulture Research and Education Center. I am a regular user of the HREC, regularly running trials on new crops for Vermont. The irrigation infrastructure is a limitation on our work, and in need of improvement and expansion.

I currently have projects funded by the VT Agency of Agriculture, USDA NIFA and SARE, and City market that all use the HREC facility for work on hops, hemp, chickpeas, peas, and other novel legume crops. We have found the irrigation to be a challenge, as the sandy soil at the HREC does not hold sufficient moisture, particularly in dry years. Several pending proposals, to USDA NIFA, SARE, and SBIR all would expand our work, and all would benefit from the capacity to irrigate on a greater number of fields.

Please let me know if you have any further questions.

Sincerely,

Eric von Wettberg



Faculty Director, Food Systems Graduate Program

Associate Professor, Plant and Soil Science

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