

**UVM Horticulture Research & Education Center
Continuity Objectives, Considerations, Mitigation,
and Preparedness for COVID-19**

March 26, 2020

UVM Horticulture Research and Extension Center hosts important research, teaching, and outreach programs for researchers and other faculty. In addition, Catamount Educational Farm, hosted within HREC, produces food on over ten acres of land that is provided to the UVM community. This document will outline general policies for continuity of operations, and specific considerations for the present COVID-19 epidemic.

The HREC is one of the research/educational centers in the Plant and Animal Biology Facilities Department. This Department reports to the Dean's Office of the College of Agriculture and Life Sciences. Resources are shared with Miller Research Center as part of the Department of Plant and Animal Biofacilities.

Management Structure *all phone numbers area code (802) unless otherwise noted*

1. HREC Director is Terry Bradshaw (tbradsha@uvm.edu, cell 922-2591).
This is the primary contact for the farm.
2. Operations Manager Andy Bessette (abessett@uvm.edu, 598-2476)
3. CEF Production Manager Rachel Stievater (Rachel.stievater@uvm.edu, 279-2920)
4. CALS Facilities manager is Guy Roberts (Guy.Roberts@uvm.edu, 825-8558)
5. Chair of Plant and Soil Science Department Ernesto Mendez (emendez@uvm.edu, 999-5889)
6. UVM Safety Lab Officer is Lee Diamond (lee.diamond@uvm.edu, 318-5570)
7. Co-directors of UVM Farmer Training Program (FTP) are Rachel Stievater and S'ra DeSantis (sdesanti@uvm.edu, 324-3073).
FTP activities report to PSS Department Chair, with Bradshaw providing administrative advisement.

Other emergency contacts are listed in Appendix 1, and at each entrance to the buildings.

DURING THE COVID-19 STATE OF EMERGENCY, and pending future changes to this guidance, the following operations will continue to be conducted at HREC:

1. All activities essential to food production
2. All activities essential to facility operation. This include any work that will be conducted to repair the main irrigation pond in spring 2020.
3. Any time-critical research activities that cannot be performed at another time and for which the PI has explicitly received approval from HREC Director.

Work that can be conducted remotely should be. This policy does not supersede general safety guidance from UVM or any state agency.

Some functions of the HREC are considered *essential operations* unless otherwise designated.

Those are:

1. Maintenance of the integrity of the core facilities, including buildings, infrastructure, and equipment.
2. Safe production of food on cropped farmland.
3. Continuity of research projects unless deemed unnecessary by the Project Investigator or their supervisor. HREC Director, in consultation with the CALS Deans' Office, will be the final arbiter of whether projects are deemed *essential*.

Workers who are deemed responsible for essential tasks must assess their comfort with this and should discuss any issues with their supervisor. Worker safety is more important than farm or research operations.

Objectives for the Research Continuity Response

1. Protect the health and safety of the University community
2. Continue as many research projects as possible, to the fullest extent possible
3. Preserve valuable research assets, such as data collections, specimens, species, genetic lines, etc.
4. Support researchers in coping with disruptions
5. Maintain services from research support and administrative units
6. Minimize disruption to the research enterprise and maximize our ability to recover

During the present COVID-19 epidemic, and unless otherwise instructed by UVM or government personnel, field-based studies that have a seasonality component will be conducted at the farm if the work may be done safely and within the scope of statewide or University orders.

General safety orders:

1. *In the event of an emergency, all personnel are expected to act in a manner that preserves human health and safety first.*
2. All farm users must comply with the normal HREC use policies in place:
<https://www.uvm.edu/sites/default/files/UVM-Horticulture-Center/HRECpolicies.pdf>
3. All procedures must meet state and University safety procedures:
 - a. <https://vem.vermont.gov> (Vermont Emergency Management)
 - b. <https://www.uvm.edu/policies>
 - c. <https://www.uvm.edu/emergency/covid-19-coronavirus-information-and-updates>
4. Present safety procedures in-place beyond normal procedures:
 - a. Restriction of gatherings of over ten persons in indoors spaces
 - i. This is a maximum allowance based on CDC and the Vermont Department of Health guidance
 - ii. All users should do whatever possible to maintain no more than:
 1. five people in the Blasberg classroom;
 2. two people in the greenhouses;
 3. two people in the staff office, or;
 4. two people in the apple/field lab at any one time.

- iii. The HREC shop should be staffed primarily by Andy Bessette or his designee. This is a difficult space to perform sanitation procedures, so it should be assumed that this is a potentially infected space. Therefore, any person working in the shop, including Andy, must thoroughly wash hands and maintain strict separation from others when entering another part of the buildings.
- iv. All public events at HREC are cancelled until further notice
- b. All staff will maintain a distance of six feet between people in all locations. This is true for both outside and inside spaces
- c. Hands will be washed thoroughly between tasks and before and after breaks.
- d. Ensuring that employees who are sick remain home. This is non-negotiable.
- e. All surfaces in common areas will be sanitized daily. Cleaning procedures will be posted in Appendix 2.
- f. All surfaces in bathrooms must be sanitized by each user before leaving with the wipes provided.

Farm staff teams

In order to ensure operations among each farm unit, the following teams will maintain direction and staffing necessary to complete essential activities. Team members are listed in order of authority to lead in the event that another member of the team is unable to perform. Other staff may complete activities for the team- this list identifies to primary point person to ensure that operations are completed.

Persons other than those listed who conduct activities at the farm during the shutdown must be expressly approved by HREC Director or his designees.

HREC Operations: Lead- Bradshaw. Advisement- Roberts, Mendez. Responsible for overall operations of the facility, including buildings, equipment, infrastructure.

- 1. Andrew Bessette
- 2. Terence Bradshaw
- 3. Rachel Stievater

Vegetable operations: Lead- Stievater. Advisement- DeSantis, Bradshaw. Responsible for prioritizing and carrying out tasks essential to implementation of vegetable crop plan.

- 1. Rachel Stievater
- 2. Ava Murphey
- 3. Jay Hardesty

Orchard operations: Lead- Bradshaw. Responsible for prioritizing and carrying out tasks essential to orchard management.

- 1. Jessica Foster
- 2. Terence Bradshaw
- 3. Andrew Bessette

Greenhouse: The UVM Greenhouse staff will continue to water on weekends and are available in the event of emergencies if personnel are not available to maintain essential functions, dependent on the Greenhouse continuity plan.

Farm staff will develop a weekly calendar to ensure that essential functions are covered, and backup personnel assigned in the event that someone cannot meet their commitment. The calendar will be submitted to Terry Bradshaw and posted weekly on the corkboard in the Blasberg classroom.

Researchers

Faculty with research projects at the farm are encouraged to delay implementation until restrictions are lifted. If research must happen earlier, each researcher should develop their own contingency plans to ensure continuity of their activities. Researchers may face limitations to building or other facility access. When in doubt, researchers and their staff should plan to not use the classroom building except for bathrooms and essential functions, and must comply with sanitation procedures in-place.

Research data and other electronic files

All important files and documents relating to farm or research operations should be stored on UVM-hosted cloud storage services, e.g., OneDrive, Teams files.

A handwritten signature in black ink that reads "Terence Bradshaw". The signature is written in a cursive style with a large, stylized initial 'T'.

Terence Bradshaw
Director,
UVM Horticulture Research & Education Center

Appendix 1:

University of Vermont
Horticulture Research and Education Center
Emergency Contact List
March 23, 2020

Physical Address is 65 Green Mountain Drive, South Burlington, VT
All numbers area code (802) unless noted otherwise

Fire/Police/Ambulance

911

POISON CONTROL CENTER

1-800-222-1222

Terry Bradshaw, HREC Director	cell	922-2591
Andy Bessette, HREC Facility Manager	cell	598-2476
Rachel Stievater, Catamount Farm Manager	cell	279-2920
Lee Diamond, Environmental Safety	cell	318-5570
Guy Roberts, CALS Facility Manager	cell	828-8558
S'ra DeSantis, FTP Co-Director	cell	324-3073
Jessica Foster, Catamount Farm Orchard Manager	cell	(856)776-6980
Miller Dairy Farm		862-2151
Scott Shumway	cell	598-2858
Plant/Soil Science main office		656-2630
Chair, Ernesto Mendez		999-5889
UVM Greenhouse		656-0465
UVM Physical Plant	emergency	656-2560
Green Mt Power	electrical	(888) 835-4762
Suburban Propane		527-7755
UVM Rescue		656-4287
UVM Recycling		656-4191
Lafayette Fence (Front Gate Service)		878-5341
Mark Levinsky (snow plowing)		355-1090

Appendix 2: Cleaning and sanitation procedures during COVID-19 outbreak
UVM Horticulture Research & Education Center
March 26, 2020

EVERY DAY:

1. First one in and last one out will sanitize (with appropriate cleaning / sanitizing materials described below) all frequently touched surfaces in the main classroom area/farm office:
 - a. Doorknobs
 - b. Tabletops
 - c. Chairbacks
 - d. Light switches
 - e. Refrigerator handle
 - f. Microwave door handle
2. Individuals will sanitize their individual work spaces upon arrival.
3. Any tools in the shop used by anyone other than Andy Bessette will be sanitized before use.
4. Staff are required to follow common-sense hand washing (minimum 20 sec) to protect their own personal health throughout the day, including activities such as washing their hands before and after eating, drinking or touching their faces.
5. Farm staff will maintain 6 ft distance from each other when working inside or outside with each other.
6. Farm staff are responsible for emptying trash into the dumpster on a regular basis. Please wear gloves when doing this, and thoroughly wash after handling.

Appropriate cleaning/ sanitizing materials must be listed on the EPA's List-N: [Disinfectants for Use Against SARS-CoV-2](#). These include appropriate concentrations of:

1. Ethyl or isopropyl alcohol (70%)
This is the primary sanitizer in-use at the farm. UVM Chem stockroom delivered a fresh supply 3/25/20).
Ethyl alcohol requires a **30 second contact time** to be effective against SARS-CoV-2
2. Sodium hypochlorite
(1000 ppm, 5 ml 5% bleach to 500 ml water. Mixed fresh every day. Contact time **30 seconds**)
3. Quaternary ammonium (label directions)
4. Hydrogen peroxide (2% mixture, label directions)

All materials must be used according to label directions, including contact time guidance. Keep in mind that contact time can be several minutes in many cases.

<https://www.cdc.gov/coronavirus/2019-ncov/prepare/cleaning-disinfection.html>