

Phytotron Chamber Rental Policies

Phytotron chambers will be allotted based on the following guidelines:

- Chambers can only be booked by a UofS faculty member
- All reservation forms must be submitted at least one month prior to the booking period.
- If available, chambers will be assigned according to the following priorities:
 1. Teaching purposes (class/lab);
 2. Undergraduate student projects;
 3. Graduate student projects;
 4. Other research use by faculty members
- Chamber rentals are for a one-year period. At the end of each rental period, the reservation list will be reviewed to accommodate new requests. If there are no reservations pending the chamber renewal can continue for another six-month period. If there are new pending reservations the current user will be placed on the reservation list and the oldest reservation will be accommodated based on the priority list.
 - Faculty who require longer-term access (i.e., breeding programs, pathology programs) will be eligible for one larger base chamber on an ongoing basis, with additional space available on a rotating basis per the guidelines above.
- The Associate Dean Research and Phytotron manager will review the chamber reservation and occupancy list quarterly. Space *may be reallocated* to accommodate requests that meet a higher level of priority, or to accommodate new renters. Six-months' notice will be given if a chamber is to be reallocated, unless it is already sitting vacant.
- Every attempt will be made to accommodate continued use of the same unit across rental periods, recognizing that there may be a need for occasional full sanitation and preventative maintenance on units some instances may require the relocation to another chamber.
- Chambers must be utilized for the specific purpose it was reserved for on the reservation form. *Subletting or swapping of chambers is not permitted.* Chambers are not to be booked and held empty for future use. Refer to chamber pricing list for a more detailed description of chambers. Reservation forms and pricing lists are located on the college website at the following link: <https://agbio.usask.ca/research/centres-and-facilities/controlled-environment-facility.php>
- When filling out booking forms please indicate the nature of the project including any pathogens and or chemicals intended to be used within the chamber. Any intended use of pathogens, inoculants or chemicals must be handled following guidelines set out in the Canadian Biosafety Handbook, 2nd edition for the appropriate risk group. The Phytotron cannot accommodate anything higher than RG1. The Phytotron is not equipped to accommodate pathogens that require higher levels of containment. <http://canadianbiosafetystandards.collaboration.gc.ca/cbh-gcb/index-eng.php>
- Also follow good microbiological practices, and following the plant pest containment standards for the appropriate risk group, see link below. <http://www.inspection.gc.ca/plants/plant-pests-invasive-species/biocontainment/containment-standards/eng/1412353866032/1412354048442?chap=4#s13c4>
- Also see the attached email from Bob Tyler with regards to the handling and use of microorganisms within the Phytotron.

Facility Access

- All persons working in the facility must complete the Lab Safety Course prior to commencing work in the facility.
- Only Phytotron chamber renters will be issued an electronic entry keycard for the facility.

- When an individual has completed work in the Phytotron, facility keycards must be returned to the Phytotron unless the card is utilized elsewhere on campus.
- Access on Wednesdays between 4:15PM and 6:30PM is restricted to Phytotron staff for the purpose of pesticide applications. All work must be completed and users must be vacated by this time with no exceptions. All entry doors are posted during this period with warning signs. Chamber renter fobs will not be usable during this period. Entry into chambers that have had an application is not permitted until signs have been removed from the chamber doors.

Facility Maintenance

- All facility common use areas (1C86 Wash area, 1C84.1, 1C84, 1C72, 1D84 and 1D80) and hallways must be kept clean of debris and plant material and cleaned by the end of each day. 1D80 Plant Material Processing room is locked at 4:30 each workday, weekends and holidays.
- Chambers should be kept clean of loose plant material and soil, which will assist in keeping insect contamination to a minimum.
- Chamber doors should remain closed when working in them except for when removing or transferring plant material. This is required in order to maintain the isolation needed between research projects.
- All waste plant material and potting mix should be discarded in the red Loraas bin located outside the Phytotron loading bay doors. Do not discard plant material and potting mix in hallway garbage bins. Materials should be *bagged prior to removing* so as to not spread insect or pathogens.

Chamber Cleaning and Maintenance

- Chambers should be emptied approximately every 6 months or sooner and returned to Phytotron staff for a thorough cleaning and maintenance. This takes approximately 1 week to complete before being returned to service. For safety reasons chamber renters should never attempt to wash chambers themselves. Phytotron staff will heat treat (3 Days), wash and service the chamber.

Cleaning and/or Maintenance of Chambers that Utilized Pathogens

- Prior to submitting the chamber to Phytotron staff for maintenance the chamber occupant must bag and discard all plant material and potting mix in the chamber prior to removal and discard in the Loraas bin located outside the Phytotron loading bay doors. In the case of pathogen use, chamber occupant is to decontaminate all contaminated surfaces using a suitable disinfectant in order to eliminate possible transfer of pathogens. Phytotron staffs will then pressure wash and bleach all surfaces within the chamber. In order to eliminate possible residual pathogens lamp canopies may require washing. An appropriate period of approximately 1 additional week may be required for these lighting systems to dry before turning the chamber back on.
- In the case of chamber mechanical failure chamber occupants will be notified the next day (or immediately if requested) so that the occupant can relocate the material to a backup chamber so that the room can be decontaminated prior to repairs being performed.
- Dirty pots/trays etc. are NOT to be brought into the facility from the greenhouse or field for cleaning. This has led to mice infestations in the past.

Chamber Programming

Programs for Chamber operating conditions must be submitted in written format and need to be submitted by 3:30PM weekdays. Programs submitted later than this time will not be entered until the following work day unless previously discussed with phytotron staff.

Supplies

Required planting supplies such as pots, trays and soilless mix should be determined prior to start of project in order to give Phytotron staff sufficient time to acquire them.

Protocols for Phytotron Chambers Located throughout the College Outside of the Main Phytotron Area

The responsibility of Phytotron Staff with regards to Phytotron controlled chambers located throughout the college includes: operating, monitoring and maintaining the chambers. The responsibility of the contents of the chambers falls on the departments and those responsible for the labs in which the chamber is located.

In the event of a chamber failure the Phytotron staff will respond to the alarm as we monitor the chambers 24 HRS a day. Phytotron staff will NOT relocate the contents of the chamber. We will, if it is a minor repair, perform the reparation work if we determine it is safe to do so. If the chamber is not easily repaired or it is determined by us to be a hazard to perform the work after hours, we will then contact the chamber user based on the protocols that the user requires.

Each chamber should have a 24 hour emergency contact person and at least one alternate contact posted on the outside of the chamber door. On the contact list a priority protocol should be listed as well. For example, is the nature of the chambers contents critical that the user is to be contacted immediately? Or can communication wait until the following day or the following workday if the failure occurs on a weekend or holiday? As well, an item list of the contents of the chamber and the nature of the work being conducted within the chamber should be posted on the outside of the chamber door with any precautions and SOP's required for entering the chamber. If a chamber does not have a contact list or a contents list or if a contact is unreachable, the chamber will be turned off and we will attempt to communicate with the user or department the following work day.

In the event that the chamber cannot be repaired immediately and once the user has been contacted, it will be the responsibility of the chamber user to relocate the materials to a backup unit located in the main Phytotron area if and only if the material does not require any special containment above Risk Group 1 (RG1). Any chemicals or biological materials that require higher levels of containment cannot be relocated in the main Phytotron area. It will be the responsibility of the chamber user/department to have a contingency plan in place for the alternate storage of these items.

For the safety of Phytotron and FOM staff, it will be the responsibility of the user to decontaminate the chamber, if required, prior to any repairs being performed by Phytotron staff or facilities management.

Chamber #	Model #	Map Location	Dept
3-1	C812	1E20	SLSC
3-2	C813	2E73	PLSC
3-3	GR176	2E73	PLSC
3-4	C820	3E21	FABS
3-5	C820	3E21	FABS
3-6	C820	3E21	FABS
3-7	C1410	3E13	FABS
3-8	C913	4E75	FABS
3-9	C727	4E29	FABS
3-10	C620	4E29	FABS
3-11	C620	4E29	FABS
3-12	C1308	5E05	SLSC
3-13	C709	5E05	SLSC
3-14	EF7	2D91	PLSC
3-15	E8H	2D91	PLSC
3-16	E8H	2D91	PLSC
3-17	EF7	2D91	PLSC

Chamber #	Model #	Map Location	Dept.
3-18	C807	4D05	PLSC
3-19	C911	4D73	PLSC
3-20	C510	5D11	SLSC
3-21	C510	5D11	SLSC
3-22	C510	5D11	SLSC
3-23	E8H	2C15	PLSC
3-24	E8H	2C15	PLSC
3-25	C1310	2C90	PLSC
3-26	C1310	2C90	PLSC
3-27	C1310	2C90	PLSC
3-28	C1310	2C90	PLSC
3-29	C1009	2C90	PLSC
3-30	C606	2C90	PLSC
3-31	C606	2C90	PLSC
3-32	C906	2C90	PLSC
3-33	E8H	5C01	SLSC

For access to the above chambers that outside of the phytotron, please contact the listed department.

Dear Faculty,

I am writing with respect to the handling and use of microorganisms in the phytotron, most specifically but not limited to the application of fungal spores in studies on plant disease resistance.

The Public Health Agency of Canada (PHAC) is in the process of confirming the Risk Group (RG) of biological materials and has developed revised guidelines for the use and containment of such materials. This has resulted in the need for some changes to policies and procedures in the phytotron. Please note the following.

1. Generally speaking, microorganisms classified as Risk Group 1 (RG1) are ubiquitous in nature and/or pose little or no health risk to humans or animals. Microorganisms in RG1 (e.g. *Trichoderma harzianum* and *Fusarium graminearum*) must, however, be used in accordance with the containment standards for RG1 materials specified by the Canadian Food Inspection Agency (CFIA), which include good microbiological laboratory practices. The PHAC also has guidelines for the handling and use of RG1 materials, including a description of good microbiological laboratory practices. **Copies of "Containment Standards for Plant Pests – Containment Level 1 – 4.1 PPC-1 Practices" from CFIA and of "Canadian Biosafety Handbook – RG1 Guidelines" from PHAC are attached. Users of RG1 biological materials must be familiar with the practices, procedures and guidelines in these documents.**
2. A biosafety permit is not required for the use of RG1 microorganisms in the phytotron or in your laboratory. However, prior to the use of any RG1 biological material in the phytotron or in your laboratory, a **Biological Declaration Form** must be completed. This form is available on the Safety Resources website, http://safetyresources.usask.ca/procedures_forms/index.php. A copy of the completed form is to be provided to Andrea Smida, Biosafety Consultant (andrea.smida@usask.ca) and to Adam Harrison (adam.harrison@usask.ca) if the microorganism is intended for use in the phytotron.
3. Researchers using RG1 microorganisms in the phytotron also must complete an **"Information Notice for Use of Microorganisms in the Phytotron"** (attached). A copy of the notice must be posted on each growth chamber or growth room in which the RG1 organism is to be used. A copy also must be provided to Adam Harrison.
4. Anyone contemplating the use of any RG2 biological material in the phytotron, greenhouse or laboratory must as a first step contact Andrea Smida, Biosafety Consultant (andrea.smida@usask.ca, 306-966-8496) for guidance.
5. Faculty and other principal investigators must ensure that all personnel in their research groups who will be working with RG1 biological materials are familiar with the policies and procedures applicable to the handling and use of such materials as described or referenced in this message. All personnel who will be working with RG1 biological materials must have completed lab safety training, biosafety training and WHMIS training, and their certification must be current.
6. According to PHAC, "RG1 organisms may also be opportunistic pathogens that pose a particular threat to immunocompromised or immunosuppressed individuals (e.g., through medical therapy, pregnancy, diabetes, or other conditions)... Where there is an increased risk (e.g., an immunocompromised individual working with an opportunistic RG1 pathogen), consideration should be given to using **containment level 2 (CL2)** operational procedures or moving the work into a CL2 zone." It is the responsibility of an immunocompromised or immunosuppressed individual to notify his/her supervisor of the situation such that appropriate precautions can be taken with respect to the handling and use of RG1 organisms, and the advice of the Biosafety Consultant must be sought.

I trust that the policies and procedures described above will aid the handling and use of RG1 microorganisms in the phytotron. It is expected that all users of the phytotron will abide by these policies and procedures. Any concerns or comments are to be addressed to me as it is not the responsibility of phytotron staff to interpret policy. It is to be hoped that past incidents of friction and debate between users of the phytotron and phytotron staff regarding the use of RG1 microorganisms will not be repeated.

This policy is effective immediately.

Sincerely,
Bob

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