

# Phytotron User Instructions

All users of this facility are expected to follow these instructions. Any questions or concerns can be directed to the Manager.

## Primary Responsibilities

- It is the responsibility of the user to:
  - care for their own plants
  - help maintain the facility by cleaning up bench tops, floors, equipment and other shared spaces after each use
  - limit the potential for cross-contamination of research projects by transgenic seeds, pests or other pathogens
  - contact the manager for advice if you experience plant growth problems associated with plant pathogens, pests, nutrient or water stress
  - report equipment failure or other problems that may be interfering with your research projects

## Fees and Supplies

- You should apply for greenhouse or growth chamber space at least 2 weeks prior to requiring it. Allocation forms and rental fees are provided on the Phytotron website <http://post.queensu.ca/%7Ephyttron/index.html>
- A range of standard plant growth supplies is available for use, including:
  - soil and other plant growth media (\*turface, vermiculite, perlite)
  - various commercial fertilizers
  - pots, trays and covers
- If you use Phytotron supplies, you must indicate on the chalkboard outside the Manager's office how much you used and your lab supervisor's name
- Other supplies and specialty items can be ordered by the Manager upon request

## Sanitation

- As a shared facility, we are all responsible for ensuring that potential sources of plant disease are dealt with appropriately:
  - **Remove and dispose of dead or diseased non-transgenic plant material regularly** by placing waste in a garbage bag and transferring it to the composter units (do not carry waste through the hallway or general use areas)
  - **Do not allow waste soils and dirty pots to accumulate.** You are required to wash your pots or trays upon completion of your project otherwise your lab will be charged for the cost of the pot in addition to soil charges
  - **Waste transgenic material must be autoclaved before placing in the compost bins**
  - Do not put any non-organic materials in the compost bins!
  - Ensure that soil bins and soil bags are closed after each use
  - **DO NOT put potentially contaminated soils back in the bins of new soil media**

## Pest Control

- Plant pests (insects and mites) are a common problem and cross-contamination is an ongoing concern. Due diligence in identifying pest problems is the first step in effective control. Accordingly, each user should:
  - Be able to identify common pest problems or signs thereof
  - Contact the Manager for control measures if a pest outbreak is suspected
  - **If you have been in a contaminated zone, wait 8-12 hours before entering an uncontaminated area of the Phytotron (e.g., greenhouse to growth chamber)**
  - Use of lab coats is encouraged prior to entry into known areas of contamination
  - In the event of an outbreak, you may be asked to dispose of your research material prior to decontamination.
  - Do not start new plants in an infested chamber or zone. Contact the Manager for access to clean space. When a chamber or zone is emptied, management staff will initiate thorough cleaning.
  - House plants should not be brought into the Phytotron without first notifying the Manager, as they may be carrying pests and other diseases – quarantine may be required.
  - The Phytotron employs biocontrol agents to control most pests. This form of control is effective but requires familiarity with the needs of the biocontrol agents and their life stages. Consult the Manager for more information.



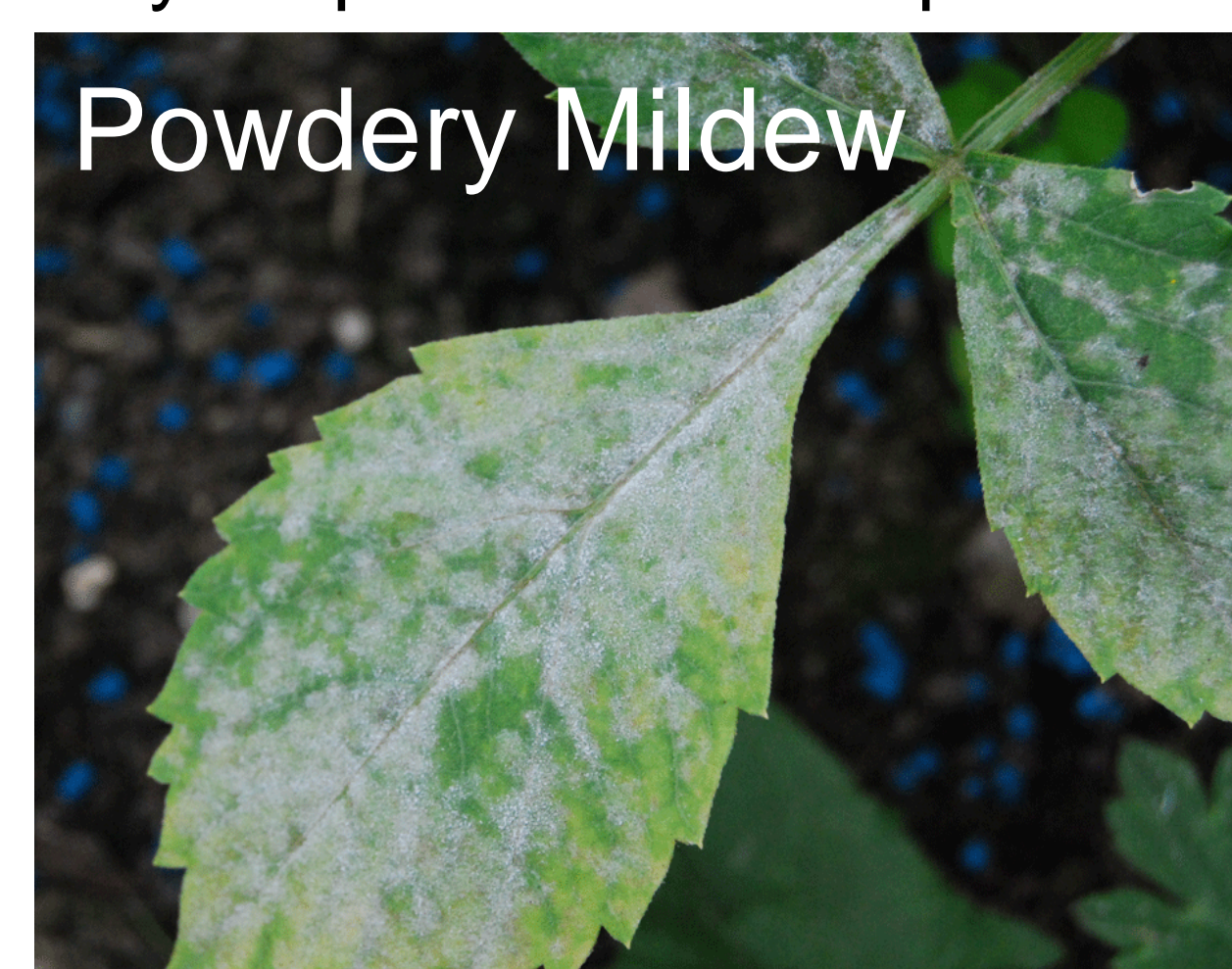
Feeding results in silvery or dark specks on leaf, adults winged, biocontrols available but slow acting



Dense, silvery webbing is first sign, extensive damage, spreads rapidly Difficult to eradicate

## Disease Control

- Fungal and bacterial disease outbreaks are usually related to improper growth environments such as overwatering or high humidity. Consult the Manager to determine the best conditions for your plants as these problems are extremely difficult to rectify!



## Emergencies

- Growth chamber or greenhouse alarms constitute an emergency, as does smoke, fire or flooding
- Problems with plant growth in a *functioning* growth chamber DOES NOT constitute an emergency and will be dealt with as a regular issue
- In the event of an emergency during regular work hours, contact the Phytotron Manager. If unavailable, call the Departmental Manager at **36137**, or Fix-It at **77301**. During after hours, weekends or holidays, contact the Emergency Report Centre at **533-6111**.
- Check the conditions of your growth chamber *regularly* to ensure it is not overheating or otherwise malfunctioning (e.g., unexpected shut-down). Contact the Manager if problems persist.
- Generally, plant trials in growth chambers can be saved by shutting down a malfunctioning unit until it can be repaired. An alternate chamber or greenhouse space may be provided
- Extreme weather events can affect greenhouse operations. Be on the alert for problems during periods of high wind or extreme cold

## Contacts

- **Phytotron Manager**
  - Dale Kristensen
  - 613-533-6151 (W) or 613-376-6561 (H)
  - [drk1@queensu.ca](mailto:drk1@queensu.ca)
- **Departmental Manager**
  - Davin Carlson
  - 613-533-6137
- **Emergency Report Centre**
  - 613-533-6111
- **Queen's Fix-It**
  - 613-533-6000 X77301