



Greenhouse Policies and Procedures

Dept. of Biology

Syracuse University

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Greenhouse Committee: David Althoff, Heather Coleman, Jason Fridley, Paul Logue

Facilities

The state of the art greenhouse on the 5th floor of LSC has ten independently controlled rooms including two rooms equipped for studying insects on plants. In addition, there is a potting shed, seed sorting facility, and an autoclave. The rooms are temperature and humidity controlled, and have automated supplemental lighting and watering systems. Each room contains at least one flood bench and a bench with an individual pot watering system.

507 (E1)		515 (E2)
503 (D1)		517 (D2)
Teaching wing		

527A (C1) Insect room		527B (C2) Insect room
525 (B1)		529 (B2)
523 (A1)		533 (A2)
Research wing		

Rooms 507 and 529 have a misting bench that can be used for germinating seeds or growing plants with high humidity requirements. In addition, there is exterior space around the outside of the greenhouse that can be used to overwinter plants or expose them to natural conditions.

There are two wings of the greenhouse—Research and Teaching – that differ in the climate control systems and lighting. The research wing has air-conditioned rooms, more intense overhead lighting, and screening to prevent transfer of transgenic plant material. The teaching wing has less intense overhead lighting and uses swamp coolers to help maintain temperature.

The greenhouse potting shed contains bench space, and limited storage for greenhouse materials and sinks for the clean up of trays, pots and planting materials.

There are 8 climate-controlled environmental chambers located in LSC 401.

Access to the greenhouse and chamber room is controlled by card swipe. Permission for access is given by the Greenhouse Manager and will be only granted for direct users of the facilities.

Responsibilities of Greenhouse Manager and Users

The Greenhouse Manager will oversee the daily operation of the greenhouse / environmental chambers. This includes maintenance of facilities, policing of greenhouse, changing of environmental controls, and providing general advice for greenhouse/chamber users.

Users agree to abide by the policies outlined in this document especially the Greenhouse / Chamber User Responsibilities. Users will also follow posted placards and instructions.

Failure to abide by the policies set forth in this document or instruction from the Greenhouse Manager may result in forfeiture of greenhouse / chamber privileges.

Training

All greenhouse users will attend a short orientation session administered by the greenhouse manager before using the greenhouse.

All greenhouse users are required to review the greenhouse policies and sign the greenhouse use consent form before use will be granted.

Space Allocation Policy

Users must fill out a Space Request Form to be evaluated by the Greenhouse Manager and Greenhouse Committee. Users must re-apply for space every six months and it may take up to three months before approval is granted. Please plan accordingly.

Once space is assigned, users have one week from the project start date to occupy the space or it will be forfeited.

In the event that greenhouse space becomes limited, priorities for space assignment in rooms will be:

- Externally funded projects
- In-house funded projects
- Graduate Student projects
- Undergraduate projects

Depending on the required growing conditions, researcher will be assigned to rooms on the research (air-conditioned) or teaching (swamp-cooled) side of the greenhouse at the discretion of the Greenhouse Manager and Greenhouse Committee.

Potting Shed

Use—container preparation for use in planting—including cleaning and sanitizing of planting equipment, and storage of seeds.

Infected plant material **should not** be brought into potting shed.

Containers that housed infected plants **should be** placed in bleach solution immediately.

Common supplies for users will be clearly labeled. There is limited storage available for users on the shelves above the benches. Please label your supplies. Additional storage is available in the autoclave room and LSC 401. Consult with Greenhouse Manager for your storage needs.

Benches and tables should be clear of items to facilitate use by any persons. Potting items should not be left on bench tops for longer than 24 hours.

Sink area should be left clean.

Follow posted Potting Shed Rules and Regulations.

Introduction of outside materials into greenhouse

Material other than commercially prepared potting media and seeds must be quarantined and checked for pests before introduction into the greenhouse. You **must consult** with Greenhouse Manager before introducing plants.

When appropriate plants must be treated and quarantined for two weeks and checked by the Greenhouse Manager or member of the Greenhouse Committee before introduction into the greenhouse.

Cleanliness and Sanitation

At the beginning of a project, room benches and floors and chambers should be cleaned with a 1:10 bleach to water solution and thoroughly rinsed. This includes irrigation systems.

Remove all diseased or dead material and associated pots from greenhouse / chambers immediately—Take plant material to dumpsters and soak containers in 1:10 bleach solution.

Keep greenhouse floors free of debris. Vacuums are available in each hallway.

Do not track mud from rooms into main hallways.

Limit room-to-room and chamber-to-chamber movement.

DO NOT enter rooms / chambers of other researchers.

At the conclusion of project, remove all material and wash benches and floors and chambers with a 1:10 bleach to water solution and thoroughly rinse. This includes irrigation systems.

Pest management

Pests will quickly increase and cause serious damage to your plants and others. It is imperative that users be extremely diligent and cautious to minimize pest introductions.

Pest surveillance forms will be posted for each occupied room. Users are responsible for visually inspecting for pests weekly and completing the form to signify compliance.

Pest Minimization Guidelines for Users:

- Limit entry into multiple rooms / chambers during a single visit.
- Refrain from moving plants between rooms and or chambers.
- Keep rooms/chambers clean of dead and damaged plant material.
- Inspect plants weekly (at a minimum) for infestations.
- Notify Greenhouse Manager **immediately** if you detect pests and take appropriate action.

Greenhouse Manager will periodically inspect plants for infestations.

Greenhouse Manager will coordinate with researchers for treatment.

Greenhouse Manager has final authority regarding infested plants.

Material Disposal

Soil and plant material must be carried to dumpsters by researchers.

All harvested infested material should be carried to dumpsters **immediately**.

NO plants from rooms or harvested plant material are to return to the potting shed.

Use clear, autoclave bags (not orange biohazard bags) when autoclaving plant material, unless there is a specific biohazard threat as outlined by EHS policies.

Greenhouse / Chamber Use Fees

Usage fees will be assessed to help defray the cost of greenhouse / chamber maintenance.

These fees will be used to replace lights, cleaning supplies, hoses and pumps, etc. and provide initial pest control. An updated fee schedule will be provided to each user.

Grant proposals submitted after March 15, 2012 must have greenhouse / chamber fees included. See Greenhouse Manager for current fee pricing.

Greenhouse / Chamber User Responsibilities:

- Occupy allocated space only.
- Do not enter other rooms or chambers.
- Minimize room-to-room and chamber-to-chamber movement.
- Keep occupied space clean at all times.
- Floor of occupied space is to be kept free of equipment and supplies
- Promptly harvest plants and clean/recycle supplies.
- Immediately remove diseased or dead plants.
- Immediately sterilize pest-contaminated equipment.
- Notify Greenhouse Manager of infested plants.
- Notify Greenhouse Manager of intent to introduce outside plants.
- Obtain and prepare materials for planting.
- Provide daily plant care, watering, and fertilizing.
- Monitor environmental conditions.
- Notify Greenhouse Manager of facility deficiencies.
- Do not store supplies in greenhouse rooms.
- Maintain Potting Shed in clean, organized condition.
- Promptly put cleaned equipment away.
- Assist in maintaining room in safe, clean condition.
- No unauthorized user entry.

Greenhouse / Chamber Space Request Form

(circle which facility)

Today's Date:

Project Start Date:
(Date plants enter space)

Project End Date:

Researcher Name:

Project Principal Investigator:

Brief Description of Project:

Source of Funding for Project:

Approximate Bench / Chamber Space Required:

Temperature requirements:

Light requirements (day/night hours):

Watering requirements (flood vs. drip vs. hand):

Transgenic plants: Yes or No

Limitations on use of pesticides/biocontrol:

Species: (Common name and scientific if possible)

Greenhouse Room Occupancy Form

(to be posted on door of each room)

Investigator(s):

Species of Plant(s):

Contact Phone: Day:

Night:

Lighting conditions: Time on: _____ Time off: _____

Temperature (°C) Day / Night:

Chamber Occupancy Form

(to be posted on each chamber)

Investigator(s):

Species of Plant(s):

Contact Phone: Day:

Night:

Lighting conditions: Time on: _____ Time off: _____

Temperature (°C) Day / Night:

Potting Shed Rules and Regulations

This is a common workspace used by a number of labs. As such, the following guidelines will be strictly enforced to ensure that everyone has equal access.

CLEANLINESS AND SANITATION ARE OF THE UTMOST IMPORTANCE

DO:

Keep bench tops free of items except during active prep/potting.

Move finished pots to greenhouse rooms as soon as possible.

Clean bench tops and floors after planting is finished.

Immediately sterilize any pots/trays that contained diseased/infected plants.

Keep sink area clean and promptly put away dry pots/trays.

Notify Greenhouse Manager of any issues concerning use.

DON'T

Bring diseased/infected plants into potting shed.

Bring any plants from rooms back into potting shed.

Leave dead or live plants in the potting shed.

Leave planting material on the bench tops.

Use items from other labs.

Leave items in sink area.

Greenhouse / Chamber User Consent Form

I have reviewed and understand the Greenhouse Policies and will follow the guidelines, posted placards and signs concerning use of the greenhouse and environmental chambers. I have attended an orientation session on the use of the greenhouse and environmental chamber facilities.

I acknowledge that failure to abide by the Greenhouse Policies or instructions from the Greenhouse Manager may result in termination of greenhouse and environmental chamber privileges.

Print Name

Sign Name

Date

Greenhouse Manager Signature

Date

Common Greenhouse Pests

(All are < 4 mm in size)

