

Jane Gray Research Greenhouse

Greenhouse User Policies

University of California, Berkeley



The JGRG Committee:
David Ackerly, Associate Professor
Bruce Baldwin, Professor
Todd Dawson, Professor
Tim Herrlinger, Instructional Support Manager, Lecturer
Kevin Charles, Sr. Nursery Technician
Ellen Simms, Professor
Derek Apodaca, MCB & VLSB Facilities Manager

Introduction

The Jane Gray Research Greenhouse is 3,600 square foot research facility located on Centennial Drive, across from the UC Botanical Garden. It is operated by the Department of Integrative Biology. The greenhouse uses ARGUS computer-automated environmental control technology, and was designed by local architects using state-of-the-art materials. The facility operates on a recharge basis and will accommodate the faculty, staff and students of UC Berkeley. In order to ensure the successful operation of the JGRG, the following policies must be agreed to by all greenhouse users.

Questions regarding the operation of the Jane Gray Research Greenhouse may be directed to:
Kevin Charles, Sr. Nursery Technician
kc366@berkeley.edu
510-643-4772

Section 1 Greenhouse Use

A. Space Allocation

1. Current space demands, project size, and timelines are all considered when allocating space. Every effort will be made to provide space to all those who need it.
2. Priority will be given to the needs of the faculty and students of the Department of Integrative Biology. Other UC Berkeley departments' greenhouse needs will be met as the facilities permit.
3. At the initiation of a greenhouse project, a Jane Gray Research Greenhouse Space Request Form is to be filled out and returned to the Senior Nursery Technician.
4. Greenhouse space is to be requested and will be allocated for the specific time period required by the project. No greenhouse space will be allocated for an indefinite period and should not be extended without consulting the Senior Nursery Technician. Inform the Sr. Nursery Technician immediately of any duration changes of a project.
5. The JGRG Chair will return a copy of the approved Space Request form to the requesting user. Along with the copy, the user will fill out the Key Application and Agreement. Return the Key Application form to Adam Doban in room 3028 VLSB, including the authorization signature from the principal investigator. A key to the front gate and greenhouse will then be granted. A refundable key deposit of \$20 per key will be charged at that time. Any keys issued to the user are to be returned promptly to room 3028 VLSB at the end of a greenhouse project.
6. JGRG users will be charged for the resources they use according to the Recharge Rate Schedule for the current academic year (see attached).
7. All first time users of the greenhouse facilities are required to schedule an orientation session with the Senior Nursery Technician. This session will introduce the user to resources within the JGRG. The correct procedures for handling containers, soil mixes, and fertilizers; disease, pest avoidance and control; water systems and watering; and other topics will be discussed and demonstrated. Researchers will also be given a copy of the Building Emergency Plan.
8. Any delays or possible delays in the start or completion of a greenhouse project are to be discussed as soon as possible with the Sr. Nursery Technician. Extended delays are

subject to review by the JGRG Committee.

9. Adjacent to the southwest exterior wall of the greenhouse, there is a 10' x 30' area owned by the JGRG. The area beyond that belongs to the UC Botanical Garden. Please respect those boundaries when doing outdoor work or when storing materials in that area. Do not use the Botanical Garden supplies or tools without first asking the Sr. Nursery Technician. Many of the tools are Botanical Garden volunteers' personal tools.

B. Greenhouse Project Requirements

1. Because changes to the cultural practices, watering regimes, greenhouse environmental conditions, programs, etc. can affect other users, the changes must be requested in writing or by email and approved by the Sr. Nursery Technician.
2. The headhouse is a secured room, and will remain accessible only when a JGRG staffperson is present. Authorized access will be evaluated on a case by case basis. The Sr. Nursery Technician is also the Instructional Plant Collector; therefore, she is not always on the premises. Arrange needed supplies or access beforehand.
3. No Genetically Modified Organisms, a.k.a. GMOs, will be allowed on the premises. Research with GMOs will be referred to the Oxford Tract Greenhouse.

Section 2 Greenhouse Sanitation Procedures

A. General Sanitation Procedures

1. Use clean containers and tools. All pots, flats, etc. are to be washed in a 1:10 bleach/water solution before being used in any greenhouse project. Tools are to be cleaned with alcohol to prevent spreading diseases. Put dirty containers and tools in their proper place. Used pots, flats, tools, etc. are to be placed on the shelf to the left of the outdoor sink. These items are not to be reused until they have been washed.
2. Wash your hands before working with plants. This is especially important when working with propagation materials (seeds, seedlings, cuttings, and planting media) or if you smoke. There is no smoking in or within 20 feet of the JGRG. This effectively means there is no smoking on the greenhouse property. Smoking is allowed across the street near the bus stop. There is an ash/butt container in that area. Be aware of fire hazards during the dry season.
3. Avoid putting plant material, containers or tools on the floor or other contaminated surfaces. The floor is not a desirable work surface.
4. Keep sterilized soils sterile. Use only washed soil scoops. Do not put these items on the floor. Do not re-use spilled soil, including that which accumulates on the floor or tables during repotting.
5. Do all of your work with the plants first. Then clean up the work area and greenhouse as a separate operation. Sweep up debris from your area, away from the drain, and then dump it into the trash. Fallen dead leaves and dirt piles are havens for diseases and insects. A broom and dustpan will be available outside by the pesticide cabinet.
6. Keep all hose ends clean and hung up off the greenhouse floor when not in use. Hoses, couplers, and watering wands are the property of the JGRG and may not be removed. Always turn off water outlets when finished watering; otherwise, the outlets can leak or "blowout".
7. All greenhouse benches, soil bins and propagation benches are to be kept clean. Do

- not use or lay any unspecialized tools, containers, etc. on these areas. Do not stand or put your feet on greenhouse benches. This will help to avoid carrying diseases up to the crop level. Greenhouse carts are to be hosed off after use.
8. All new plant material introduced into the greenhouse should be inspected for infestations. Infested plants are not to be brought into the greenhouses, but should be treated separately by the Sr. Nursery Technician.
 9. The headhouse corridor and the JGRG perimeter are to be treated as separate non-sterile areas. After working with plants or soil in these areas, wash your hands before working any other part of the greenhouse. Do not use or carry tools or containers from these areas into any other growing area of the greenhouse. Sterilize tools in ethyl alcohol.
 10. All insect and disease problems are to be reported immediately to the greenhouse staff.
 11. All greenhouse space is to be kept clean and orderly by the user(s).
 12. Greenhouse rooms are not storage areas for pots and other cultural supplies. No items are to be stored under the benches. Consult with the greenhouse staff for alternative storage. Any clutter left in the greenhouses or access corridors will be removed without notice by the greenhouse staff.
 13. Please label plants, flats, or benches with your name and contact information. The staff maintains the right to discard unauthorized plants without notice. In labeling individual plants for research, try to label each plant 2 different ways as labels often fall off, break, or fade.
 14. Equipment and researcher supplies in a room can get wet from watering or humidity. It is the responsibility of a researcher to store the equipment and supplies in a way that stays dry.
 15. There is an autoclave in the breezeway available for sterilizing soil and certain types of pots. Ask the Sr. Nursery Technician for instructions on how to use the autoclave.
 16. Throw non-green waste material in the trash can labeled "Trash Only". There is also a gray recycle bin in the breezeway for recyclable plastics, soda cans, etc.

B. Disposal of Plant Material

1. Large quantities of waste plant material should be discarded into the "Green Waste" containers. Do not fill a Green Waste container so that it is too heavy for someone to lift. If you need extra Green Waste containers, please ask.
2. Unwanted, but botanically significant specimens may be donated to the UC Botanical Garden by arrangement. Generally, these donated specimens will be sold during their semi-annual plant sale.

Section 3 Supplies

1. Project requirements for greenhouse supplies (containers, soil mix, labels, etc), are to be obtained by researcher. Greenhouse users are expected to supply their own pots for their research. Check with the Sr. Nursery Technician to see if recycled pots, flats, labels or donated soil are available.
2. A need for large quantities or unusual types of supplies requires advance planning.

The staff can assist with the ordering of pots if given prior notice. Specially ordered supplies will be recharged for the cost.

Section 4 Responsibilities

A. Services provided

The following services are provided, via recharge, by the Jane Gray Greenhouse staff include:

(Please review the current Recharge Rate Schedule for the following services)

1. Assistance with design, setup, configuration of environmental conditions, planting and maintenance of greenhouse projects. The staff is also available to assist with problems or special needs that may arise during the course of a greenhouse project.
2. Watering and fertilization of plants by the Sr. Nursery Technician can be set up. Watering and fertilizing are not part of experimental treatments. Watering services are an additional fee and should be considered a cooperative agreement between the researcher and staff. If the Sr. Nursery Technician is doing the watering, notify her of any changes in schedule or plant needs.
3. Disease and pest control programs, usually after consultation with the user.
4. Growing plant materials for research use.
5. Assistance with the acquisition of soil, pots, seeds, or plant materials required for greenhouse projects.
6. The JGRG staff and Committee will arbitrate conflicting environmental requirements for greenhouse users and attempt to accommodate the needs of all users. In general, environmental conditions will be determined on a first-come, first-served basis. In the event of a dispute, the JGRG Committee will have the final decision-making power.
7. In order to efficiently use the greenhouse space and resources, the staff may elect to consolidate or move plants, in consultation with the PI.

B. Expectations of All Greenhouse Users

The greenhouse user will, in general, be expected to do the following:

1. Work in cooperation with staff in the acquisition of soil, pots, seeds or plant material required for the greenhouse project.
2. Carry out all experimental treatments and make all experimental measurements.
3. Harvest all plant materials required for experimental purposes.
4. Maintain an active role in the progress of the greenhouse project, including shared or sole watering responsibilities. The staff is not responsible for watering if it is considered part of the experimental treatment.
5. Notify the greenhouse staff promptly at the end of a greenhouse project. Assist with the disposal of unneeded plant material and the removal of equipment at the completion of the experiment.
6. Notify the Sr. Nursery Technician as soon as possible if anything is wrong with the control systems or if something is not working properly in the greenhouse. Contact numbers of responsible staff are located on the headhouse door and the front gate of JGRG.

Section 5 Safety

- 1.** The greenhouse staff will post a notice of pesticide applications on greenhouse doors, including what pesticide was sprayed, when it was sprayed, and the mandated re-entry period (REI). EPA-approved NO ENTRY signs will always be on the doors of treated areas, meaning the restricted access is currently in effect. These will be taken down shortly after the label-designated period of restriction is over. Secondary notice signs next to NO ENTRY signs will state the re-entry conditions if allowed.
- 2.** Greenhouse users must abide by all restriction in areas treated with pesticides. Repeated violations of entry restrictions by a user (including faculty) will result in the door being locked following any application in their greenhouse.
- 3.** Due to pesticide residues, do not bring food or drink into a greenhouse. It is always a good idea to wash your hands after working in the greenhouse. Impermeable gloves are also recommended.
- 4.** Be aware of slippery, wet floors. Floors will be routinely scrubbed by the JGRG staff with bleach to prevent algal growth.
- 5.** Closed-toed shoes are recommended in the greenhouse.
- 6.** Keep the breezeway free of obstructions, even if you are working. The breezeway is often used by Botanical Garden staff and volunteers (some are elderly) as a passageway.
- 7.** Please do not bring animals, ornamental plants, or children into the greenhouse.

Summary

The Jane Gray Research Greenhouse is a valuable resource for plant research on the UC Berkeley campus. With the full cooperation of greenhouse users, the facility can contribute to the greater educational mission of the university. By signing the JGRG Space Request Form, the preceding policies are acknowledged by the greenhouse user.