

INFORMATION FOR RESEARCHERS USING THE PLANT GROWTH FACILITY AT THE UNIVERSITY OF CALIFORNIA, SANTA CRUZ

WHO TO SEE

Jim Velzy (jhvelzy@ucsc.edu) manages the UCSC Greenhouses, allocates space in the greenhouses, growth chambers, and outdoor areas; seeks overview of projects, provides technical advice, orders seeds or other materials needed for experiments as well as items related to growing plants, authorizes key signouts, and serves as backup to Denise in her absence. In addition he establishes policy along with faculty, oversees security, and does some preliminary research for special projects.

Denise Polk (dmpolk@ucsc.edu)-consults and assists in setting up experiments, is responsible for growing the plants, provides technical advice especially as it relates to growing plants. She also provides information about their growing conditions, their status, etc. She will assist you in transplanting, pollinating, collecting and sorting seeds, sowing seeds, using equipment, etc.

WHAT SERVICES WE PROVIDE

- we grow your plants (incl. watering, fertilizing, pest and disease control);
- we maintain the facility and make sure all equipment is running properly.
- we serve as a resource for plant related information.
- we provide catalogs of equipment related to plant research (i.e. growth chambers, incubators, light measuring equipment, etc.)
- we provide information on propagation and other aspects of horticulture including catalogs of horticultural supplies.

ITEMS WE PROVIDE:

- Equipment: LICOR light meter with sensors which measure light in micromoles/m² sec⁻¹, klux (lux), W/m²; a dissecting microscope for use in the facility; LICOR CO₂ infrared gas analyzer; autoclave.
- Containers: pots, flats, etc are provided by the greenhouse unless there is a very long term use, a one-time use, or it is not an item generally used by others.
- Fertilizers, pesticides, etc.- are generally provided by the greenhouse. Any that are special (dedicated) or part of an experiment are to be provided by the researcher.
- Paper for seed collection (to lay out under and next to flats).

WHAT MATERIALS YOU NEED TO PROVIDE

- Labelling materials-We suggest you use waterproof pens on colored time tape or plastic labels. All the above are available in the stockroom except the plastic labels which are from an off-campus source. Small envelopes for seed collection, bags to use for pollination work, etc. are to be provided by the research labs. We have sources if you wish to order them.
- Other items dedicated to your particular experiments such as forceps, probes, petri dishes, etc.
- If you need space to store these types of items in the greenhouse for frequent use, please let us know. We can provide a drawer or a small amount of space for you.

YOUR RESPONSIBILITIES

- It is your responsibility to dispose of plants and soil and to remove labels and rinse containers after plants and soil have been discarded.
- It is important to alert us to particular plants or groups of plants that are especially critical in your work. We try to provide the best care possible to all plants; however, if you know that some plants are especially sensitive for any reason or you need them for a particular use at a certain time, please let us know so we can keep an extra close watch on them.
- Please tell us if there are risk factors involved with your plants or soil before using or applying them. These include chemicals (such as chemicals you may apply to the plants or soil), heavy metals in the soil, physical factors (such as pastes or pointed objects).
- You must have any plant material brought in from outside of the premises visually inspected by Jim before it is placed in the facility. It may be quarantined as necessary.
- It is your responsibility to tell us if you are bringing soil and plant material from outside Santa Cruz County. These materials will be disposed of by autoclaving at the end of the experiment to kill unwelcome seeds and soil pathogens.
- It is your responsibility to tell us that your experiments will involve plant pathogens, herbivores or transgenic plants. Containment of any kind will be handled on an individual basis.
- If you temporarily remove plants from the greenhouse or the growth chamber, it is your responsibility, when you replace them, to make sure they have adequate water to survive to the following morning.

SOME DON'TS

- Don't program the growth chambers, incubators or regulate equipment in the greenhouses. Only Jim or Linda regulate and program the growth chambers, incubators, and greenhouses.
- Don't move plants from the greenhouses to the growth chambers or vice versa unless you have spoken with Jim. Also don't move plants from one greenhouse to another unless you have spoken with Jim.
- Don't introduce any radioactive materials into the greenhouse facility.
- Don't enter greenhouses that have been treated with chemicals. We post brightly colored non-entry signs that should be respected. DO NOT ENTER until the posted entry time has been reached. Spraying is usually done in the late afternoon (after 4 pm) and often on Fridays. Spraying at these times places re-entry hours through the night and into the weekends to allow researchers full access during the weekday hours. If there are critical times where access to your plants is mandatory, please let us know so we can plan sprays accordingly. In other words, let Jim know if you plan to be actively working on your plants during late afternoons, evenings and weekends.
- Don't apply plant growth regulators (herbicides, GA, Bonzi, etc.) in the greenhouses. (Spray drift may occur and thus affect someone else's research.) Remove your plants, take them to your lab (fume hood), and spray there. Wait till the plant is dry before returning it to the greenhouse. Post a sign (or tell the greenhouse staff) stating that it was sprayed with (*chemical name*).

IF YOU WANT SPACE IN THE GREENHOUSE OR GROWTH CHAMBERS:

- Because growth chamber space is limited and there are often more requests than space available, we will ask for an approximate end date for your growth chamber needs. As space is assigned on a first come-first serve basis, let Linda know as far ahead as possible what your space needs are.
- You must complete a greenhouse use form and submit it to Jim before plants, seeds, and materials are placed in the facility.
- For grads and undergrads, it is imperative to talk to us before setting up your experiment; preferably while you are planning it. There may be some factor in the experimental design that could be incompatible with the care we provide or there may be some technical information that will be useful to you before you complete your plans. The researcher should go back to the faculty sponsor to discuss any suggested changes before actually setting up the experiment.
- If you have an established protocol for the plants in your experiment, please let us know. These may include instructions for seed treatments for germination, environmental parameters for the growth chambers, etc.
- In general, we don't have long term storage space to store large quantities of soil or other media, large quantities of seeds, large pieces of equipment, etc. If you have small quantities of soil and seeds or items which are to be used for a current experiment, that's perfectly fine.

GREENHOUSE HOURS: SINSHEIMER: M-F, 9-3

THIMANN: M-F, 9-3

ISB: Locked entry

For access outside of these times you will need a key.

GREENHOUSE PHONE: SINSHEIMER: 459-3485

THIMANN: 459-2454

ISB: 459-1726

For more information see our website: <http://greenhouse.ucsc.edu>