



University of Saskatchewan Insect Research Facility (USIRF)

User Rate Schedule and Chamber Specifications 2024/2025

1. Facility Rate Information

The USIRF rate schedule requires users to pay a weekly permit fee and a daily chamber user rate for the duration of their facility use. The rates grant access to a variety of laboratory equipment in the facility, including selected growth chamber(s), incubated benchtop shaker, clean bench, benchtop microbead sterilizer, bench space, analytical balance, dissection stereo microscope, incubator, iPad, watering cans, cart and simple laboratory hand-held tools. All required PPE is included in the rates. The facility also houses an autoclave operated exclusively by USIRF staff. Users may request autoclave cycles as needed, which is included in the user rate.

Additional charges will apply for pots, soil, petri dishes, microcentrifuge tubes, and fertilizer, which are purchased separately. Specialized insect equipment is available for use and may incur either a one-time or a daily rental fee, depending on the equipment.

To further support your research, fee-for-service assistance from USIRF staff is also available, with charges determined based on project specifications. Services provided include but are not limited to, watering, plant care, rearing and maintaining insect colonies, and project consultation.

Permits Rate:

	Plant Science Faculty	College of AgBio Faculty	USASK Faculty (Non – AgBio)	Outside USASK (Off-Campus)
Basic	\$22.00	\$22.00	\$24.00	\$44.00
PPC-1	\$22.00	\$22.00	\$25.00	\$50.00
PPC-2	\$25.00	\$25.00	\$27.00	\$100.00

Chamber Daily Rates:

	Plant Science Faculty	College of AgBio Faculty	USASK Faculty (Non – AgBio)	Outside USASK (Off-Campus)
Walk-In - GR48	\$75.00	\$80.00	\$85.00	\$170.00
Reach-In	\$21.00	\$23.00	\$25.00	\$50.00

2. Chamber Specifications

The USIRF consists of 6 environmentally controlled chambers, including 4 reach-in chambers and 2 walk-in rooms, all programmable to produce various environmental conditions such as specific light qualities and intensities, temperature ranges, and humidity levels. Users may rent more than one chamber simultaneously, depending on availability.

USIRF contains 4 reach-in chambers manufactured through Conviron Environments Limited.

- These units are considered the GEN1000 series operating CMP6060 control systems. The control system has the availability to store 16 real-time user-entered environmentally controlled programs, each containing up to 48 lines with a one-minute resolution.
- Interior dimensions 37 ½" W x 24 ¼" D x 52 ½" H with the availability of growth volume of 27.6 ft³ and growth height of 43 ½". Single height adjustable shelf supports up to 60 lbs. of distributed load.
- Lamp fixtures use Broadband spectrum using 12W T5 LED fixtures producing lighting intensity of 550 - 700 µmol/m²/s, photosynthetic photon flux (PPFD). The light intensity can be changed to produce specific required PPFD settings for users.
- Temperature ranges +4 °C to +40 °C lights OFF and + 10 °C to +45 °C lights ON.
- Three of the chamber units have humidity controls with the range of 90% RH lights OFF, 75% lights ON, limited by a +25 °C dew point. Humidity control accuracy is $\pm 6\%$ relative humidity. The range of humidity may achieve higher levels with planting loading. One unit does not have the availability for additive humidity control.

USIRF contains 2 walk-in chambers manufactured through Conviron Environmental Limited.

- These units are considered Conviron E-Room Retrofits series operating CMP6060 control systems. The control system has the availability to store 16 real-time user-entered environmentally controlled programs, each containing up to 48 lines with a one-minute resolution.
- Interior dimensions of each walk-in is 6' - 6 ¾" W x 6' - 1 ¾" D x 8' - 10" H. Each chamber contains two stainless steel adjustable shelving units sizing 60" W x 24" D x 86". Each shelf has three tiers which allows plentiful space for vertical farming.
- Each chamber contains six modular Fluence RAZR BROAD R3A Spectra LED lighting systems producing lighting intensity of 149 – 237 µmol/m²/s, photosynthetic photon flux (PPFD). The light intensity can be changed to produce specific required PPFD setting for users.
- Temperature ranges +4 °C to +40 °C lights OFF and + 10 °C to +45 °C lights ON.
- Both walk-in chambers have humidity control with the range of 90 % RH lights OFF, and 75% lights ON, limited by a +25 °C dew point. Range of humidity may achieve higher levels with planting loading, however, both walk-in chambers have de-humidifying control which can provide more stable settings.