

## GENERAL

### Office Supplies (Academics and Staff)

Basic office supplies for staff are available from the Plant Science General Office. Supplies required for research purposes are purchased using your supervisor's research funds.

### Photocopying/ Printing (Academics and Staff)

Located in Plant Science General Office (Room 222). A code is issued for the use of copying and printing things essential to your research.

### Vehicle Use (Academics and Staff)

Departmental or appropriate research program approval must be arranged prior to use.

To Operate:

- A valid Canadian driver's license (required)
- A general walk around the vehicle should be performed before each use
  - Inspect of tires, lights, fluid leaks and over-all vehicle appearance
  - each fueling, all fluid levels should be checked for safe operating levels

Each vehicle has a QR code, where mileage in and mileage out as well as reason for trip, date and driver name should be recorded. Any tickets received (parking tickets, speeding tickets etc.) are the sole responsibility of the driver.

### User Responsibilities of Field Equipment (Academics and Staff)

Departmental or appropriate research program approval must be arranged before use.

To Operate:

- A general walk around equipment should be undertaken prior to each operation.
  - inspect all necessary fluids for safe levels of operation, belts or other moving parts for excessive wear or damage, and tire inflation.
  - Pre-operational maintenance
    - lubrication of all wear points as required,
    - cleaning radiator screen/radiator, and air filter if required.
- Any malfunction or damage noticed in the inspection or incurred during equipment operation should be reported the general office as soon as possible.

## Administrative Information

### Purchases (Academics and Staff)

Send orders to [psorders@umanitoba.ca](mailto:psorders@umanitoba.ca) using Systems Contract requisition form.

Include

- your supervisor's name
- valid fund number

Please note that all purchases are to be approved by your supervisor prior to the purchase. Please ask questions prior to your purchase.

## Travel Policies & Procedures

Please contact Amanda Bonne with any questions before travel or making travel arrangements.

Check with your supervisor on whether you will be required to keep your meal receipts or claim a daily per diem.

Keep all expense receipts (meals, taxis, accommodation) related to your trip.

On return submit a

Concur Claim must be submitted (academic or staff)

- Request access to concur and finish training to submit your form.
- Fill out Concur Claim
- Attach all your receipts
- Receive approval signature form supervisor
- Email form and information to

Travel Claim form (Student/ Guest)

- Fill out form\_  
[https://umanitoba.ca/admin/financial\\_services/media/Guest\\_Student\\_Travel\\_and\\_Business\\_Expense\\_Claim\\_form.pdf](https://umanitoba.ca/admin/financial_services/media/Guest_Student_Travel_and_Business_Expense_Claim_form.pdf)
- Attach all your receipts
- Receive approval signature form supervisor
- Email form and information to Amanda.Bonne@umanitoba.ca

Notes:

- Travel expenses are reimbursed by direct deposit. Allow approximately two weeks for processing once the claim is made and been submitted to administration.
- For conference or workshop, the participants must register themselves and request a reimbursement.
- If not traveling by plane, supply information on the transportation you used including mileage and exact route.
- If you did not have accommodation expenses, an explanation must be included.

## Graduate Student General Information

### Keys

Admin HR Finance at the Plant Science General Office (Room 222). A request from a supervisor and deposit of \$25.00 is required.

### Office Space

Graduate students whose research is conducted in the Department of Plant Science or at one of its research facilities will be assigned an office in the department. Normally, students conducting their research at an Agriculture and Agri-Food Canada facility will have an office there.

## Mail

Graduate students will have a mailbox in the Graduate Lounge (Room 153).

## Courses and Registration

To learn about courses and registration procedures, access the University of Manitoba Graduate Calendar at <http://www.umanitoba.ca/calendar>, and the Aurora Student registration system.

## General Laboratory Information

### Handling & Storage of Samples

All samples to be handled or stored at "The Point" must have proper identification labels attached. Label information must include research program and individual contact names, materials enclosed with date of entry. All samples to be stored must be placed in mouse proof containers.

### Vernalization Room, Freezers

The use of cold rooms/freezers (rooms 008A-008E inclusive, plus rooms 192 and 193) requires that anything placed in these rooms be identified with the user's name and the anticipated finish date.

### Safety Checklist

Technicians are to refer to the following safety checklist during orientation of new students to ensure all areas of safety have been discussed:

- Emergency eye wash stations
- WHMIS/MSDS
- First aid kits and where to replenish them
- Emergency phones
- Fire extinguishers
- Emergency exits
- Appropriate working attire, sunscreen, hat, etc.
- Location of this orientation handbook

## LABORATORY SAFETY

### WHMIS and MSDS

All research units are required to operate under the Workplace Hazardous Materials Information System (WHMIS).

Before working with a chemical, be aware of its specific hazards and of any precautions you should take in handling and disposal. This information can be found in the MSDS sheets. Web links for MSDS sheets can be found at: [Workplace Hazardous Materials Information System \(WHMIS\)](#) | [Environmental health and safety](#) | [University of Manitoba \(umanitoba.ca\)](#)

## Chemical Disposal in Plant Science

Waste Organic chemicals: Must be poured into a labelled waste bottle.

Waste Acids and Bases: Must be poured into separate, labelled, waste containers. DO NOT mix the two.

When waste containers are full, contact the Safety Office (474-6316) for removal.

## Chemical Storage

Flammable and combustible liquids must be stored in containers no larger than 4 litres and stored in a vented flammable storage cabinet.

Acids and Bases must be stored in separate cabinets.

There is a hand pump for dispensing ethanol from 25 L containers into smaller bottles located in room 334.

Transport liquid chemicals in a safety container or rubber bucket.

## Procedures for Handling Plants with Novel Traits (PNT's) in the Greenhouse

The Canadian Food Inspection Agency (CFIA) requires that all PNT's be contained and destroyed using methods that prevent their release into the environment. The following is a list of principles and procedures to be followed when working with PNT's in the greenhouse.

1. Isolation - PNT's should be reproductively isolated from all other same species plants. This can be done in several ways such as timing, separation and/or bagging.
2. PNT's need to be clearly labeled with their own readily identifiable labels.
3. The plant material and seed should be kept in the building at all times and in the greenhouse as much as possible.
4. Any PNT material should be clearly dead before discarding. For the vegetative materials, thorough drying and/or a herbicide spray followed by sufficient time to ensure that the plants are dead is adequate. Alternatively, plants can be autoclaved for 60 minutes.
5. Any PNT seed must be kept contained to the building and/or greenhouse.
6. The Harvesting of PNT's should be done with great care in the greenhouse to ensure that seed does not escape. Thresh the plants over a plastic sheet to ensure that PNT seed does not go astray. The floor should be swept up at the end of harvesting the plants and these sweepings collected for autoclaving in clearly marked bags.
7. The pots that have grown PNT's should be thoroughly watered and retained in the greenhouse for 2 weeks to verify that no PNT seeds have fallen into the pots. If any similar plants emerge, they will be killed manually or with herbicides, as appropriate.

## Protocol for Handling Foreign Fungal Cultures

This protocol is only valid for fungal pathogens that do not have profuse sporulation, such as powdery mildews, rust, *Penicillium* or *Botrytis* sp.

1. When working with any culture and especially foreign fungal cultures, all containers (Petri plates, tubes, flasks) used for storage or inoculum increase must be labeled and dated.
2. All cultures and leftover inoculum must be autoclaved, when no longer needed.
3. All containers, equipment and surfaces which come in contact with the fungus are autoclaved or sterilized with concentrated bleach solutions (or 95% ethanol).
4. Inoculation of plants, if performed, is generally done in winter in growth cabinets/rooms.
5. Infected seedlings and growing media are systemically autoclaved prior to disposal.

6. Foreign cultures must be stored in safe areas, away from public access. The use of -80 freezers is recommended if it is compatible with the survival of the organism.

## Protocol for Notification of Pesticide Applications on University of Manitoba Research Farmland

### Purpose

The purpose of this protocol is to ensure:

- a. That all users of and visitors to the agriculture research farmland and facilities at the University of Manitoba are duly informed of pesticide applications. This would include staff from the University of Manitoba (Plant Science, Entomology, Native Studies and others); and
- b. That adequate information is provided or posted to ensure the safety of all parties who may use these areas and surroundings.

### Protocol Contacts

All research farmland belonging to the University of Manitoba is under the control of the Faculty of Agricultural and Food Sciences through the Department of Plant Science or Department of Animal Science.

#### Carman and Region Research Facility

Contact: Justice Zhanda

Address: Box 1669, Carman MB R0G 0J0

Telephone No: (204) 745-3944

e-mail: [justice.zhanda@umanitoba.ca](mailto:justice.zhanda@umanitoba.ca)

#### Glenlea Research Station

Contact: Jason Bourcier

Address: Operations Manager, Glenlea Research Station

Telephone No: (204) 293-4625

e-mail: [jason.bourcier@umanitoba.ca](mailto:jason.bourcier@umanitoba.ca)

#### The Point at Fort Garry Campus

Contact: Melvin Kaufman

Address: Room 222 Agriculture Building, University of Manitoba, Winnipeg MB R3T 2N2

Telephone No: (204) 474-9898 or (204)648-7570 (cell)

e-mail: [melvin.kaufman@umanitoba.ca](mailto:melvin.kaufman@umanitoba.ca)

### Responsibility of Contact/Co-ordinator

At the beginning of each research season, the contact person will post a sign at the main entrances to the research farmland warning that the area is a pesticide application area. The sign will indicate the name and phone number of contact person(s).

### Responsibility of Users of Research Farmland

#### Pesticide Applicator

The pesticide applicator must have received training and be familiar with the safe handling, application and disposal of pesticides. The pesticide applicator must have received prior permission to apply pesticides through the Land Request form. Land Request forms are available through a contact person. Each pesticide application must be communicated within a 24-hour window before the pesticide application time using a group text prior to pesticide application. A single texting app will be selected for everyone to use. The notification text should communicate the following:

- Pesticide Applicator and cell phone #

- Date and time of application
- Pesticide applied (and type: insecticide/herbicide/fungicide)
  - Or indicate various insecticides / herbicides / fungicides will be applied for experiments testing multiple pesticides
- Field block in which pesticide was applied
- Safe re-entry date and time

A cancelation text must be sent if the pesticide application is changed (i.e., postponed, canceled, etc.). Warning flags must be placed at the two diagonal corners of the affected field. The pesticide applicator must remove the warning flags as soon as possible after the restricted re-entry period ends.

To minimize the risk of pesticide exposure for bystanders, the pesticide applicator is expected to speak with all people located within a 50 m radius of the pesticide application site prior to starting the pesticide application. The pesticide applicator is not required to stop a pesticide application if someone approaches the pesticide application site once the pesticide application has started. Other personnel should remain at a safe distance from the application area while the application is taking place.

In general, pesticide application takes priority over other work on Research Farmland. All farm users are expected to work collaboratively to minimize disruptions in each others' schedules.

#### Non-Applicator Users of the Research Lands

It is the responsibility of all users of the Research Farmland to look for and avoid areas that have pesticide warning flags posted unless they are wearing appropriate safety equipment. It is the responsibility of all users of the Research Farmland to watch for pesticide applications in progress for their own safety. All visitors and non-regular users must confirm field test access with the responsible technician.

## Ian N. Morrison Research Farm Carman & Region Facility Safety Procedures

### Building Alarm System

The main building is equipped with a security alarm system that is set at the end of each working day and weekends. Do not enter this building when locked after hours, weekends and holidays unless you have been assigned an access code and have been instructed in lockup and alarm procedures.

### To qualify for a Carman Building Alarm Access Code

- a. Be a Plant Science or Campus Manitoba staff member, graduate or summer student who has demonstrated that their work requires access to the building outside regular working hours and weekends.
- b. Have been issued a building staff entrance key from the Department of Plant Science.
- c. Obtain a user identification code and pin number, training in lockup and alarm procedures and demonstrate they can turn the alarm system off and on without triggering an alarm.

### Lockup Procedures

- Equipment is to be turned off (example: fan, computers, scales, fume hoods).
- Tools and equipment are to be returned to their proper or assigned location.
- Keys are to be removed from all vehicles and field equipment and placed on the labeled hook in the key cupboard located above the sink in the shop (room 125) of the main building.

- Vehicle windows are to be closed and doors locked. Tools are not to be left in the back of trucks overnight, weekends, and/or holidays.
- Power to bulk fuel tank gas and diesel pumps are to be turned off (Building #9).
- Doors in all buildings are to be locked and secure.
- Determine if you are the last person to leave the Main building and who will activate the alarm security system.

If you take a key home by mistake or find a key missing, contact Carman Research Station Manager at 204 745 8642.

### Equipment operation

All equipment operators must receive training and/or hold a drivers' license to operate farm equipment such as tractors, combines and ATVs. A safety orientation will be conducted annually spring, but this will not be treated as training on how to operate equipment. Any safety concerns noted prior to, during or after use should be reported immediately to the Field Service Technician or Station Manager. No equipment should be operated if it poses danger to the safety of the operator.

Driving speed limits posted on various sections of the farm should be adhered to all the time.

### Ask Before You Dig or Soil

Sample There are many hidden hazards throughout the Carman Research Station such as buried high voltage electrical and high-pressure natural gas lines and water lines. Contact Carman Research Station Manager for more information.

### Carman Computer and Internet Access

See Carman Research Station Manager for assignment of a user ID and password.

### First Aid Kits

First aid kits are in the shop cupboard above the sink (Room 125), and in the kitchen (Room 110) and the lunchroom (Room 119) in the main building and in each Plant Science vehicle.

### Fire Extinguishers

Fire extinguishers are located on strategic and easily accessible locations throughout the main building, cold storage buildings, bulk fuel tanks and in/on all vehicles and tractors. Training on the use of fire extinguishers will be required. Please contact your immediate supervisor to arrange for this training.

### Fire Procedures Carman

The main building is equipped with a fire alarm system. The University of Manitoba, Carman & Region Facility, General FIRE EMERGENCY Procedures and Emergency Exit Plan is posted throughout the main building. When a fire alarm is triggered, follow posted University of Manitoba fire emergency procedures (R.A.C.E.) and leave the building using the safest, closest exit door. People are to meet outside at the designated fire assembly point on the north-east section of the main building (690). If it is unsafe to meet at the north-east location and wind is



from the south, meet at the designated site on the south-west of building 690. Ensure everyone is accounted for and that people can be assigned to warn others not to enter the building from other entrances. The fire department will respond to a fire alarm regardless of whether it is false or real.

### Carman Chemical Storage

The pesticides storage area is in the main building at Carman (Room 130). Pesticide containers are to be clean, sealed, not leaking, and placed in plastic totes on or under the shelves. Pesticides are arranged in alphabetical order by program with a separate section for insecticides within the room and labeled with a permanent alpha-numerical inventory number. Each plastic tote is labelled with chemicals contained in it. The inventory number is recorded in the inventory binder located within the same room. Safety Data Sheets for each chemical in storage are to be kept in binders on top of the filing cabinet in the chemical lab (Room 129) of the Carman and Region Facility. Use internet access to update any outdated Safety Data Sheets.

### Carman Bulk Fuel Filling

Motorized licensed vehicles are to be fueled at the Co-op in Carman, not from bulk fuel tanks located on the farm

There are two above ground, double walled, 500 gallon, Westeel Vacuum Vault bulk fuel tanks located at Carman for fueling of farm field equipment with either dyed diesel fuel or gas. Each tank is labeled and has a metered electric pump with an auto shutoff handle.

Do not smoke or use a cellphone while filling gas or diesel.

Do not put diesel fuel in a gas engine, or gas in a diesel engine as this will cause severe engine damage if run in this manner. If you have by accident, put the wrong fuel type in a piece of motorized farm equipment, do not run the engine, contact the Ian. N. Morrison Carman Research Farm Manager immediately. There is a fire extinguisher located by each fuel tank. There is an EMERGENCY FUEL SHUT-OFF located on the outside Northeast corner of building #9. This will kill the power to both pumps in the event of an emergency.

If fuel tanks are empty, contact Carman Research Farm Manager.

#### Filling procedures:

1. Turn engine off.
2. If you are first to use the pumps, turn on the labeled main power switches located just inside the walk-in door of building #8. There is a labeled switch for each pump, and both need to be turned on. These switches are to be turned off at the end of each workday to prevent unauthorized access to fuel outside of normal working hours.
3. Remove the fuel use logbook from the mailbox holder located at the fuel tanks and write down the starting meter reading for the fuel you are accessing, diesel or gas.
4. Remove fuel filler cap for the engine.
5. Put auto filling end of the hose into fuel tank.
6. Turn on pump.
7. Fill tank, being careful not to overfill.
8. When tank is full, release auto fill handle and turn pump motor off.
9. Release pressure and fuel into the tank before hanging the handle back up in its holder.
10. Put the filler cap for the engine back on securely.



11. Record the ending meter reading in the fuel use logbook and place it back into the mailbox holder closing the lid.
12. At the end of the day, turn off fuel power switches located in building #8