



Reference Guide for Researchers and Educators

Musgrave Research Farm, Aurora

This document is intended to provide essential information for faculty, staff and students conducting work at the **Musgrave Research Farm** in Aurora, NY, one of nine farms managed by the Cornell University Agricultural Experiment Station (CUAES). It is **highly recommended that you review this document** for farm-specific information, and, to be aware of farm-specific safety and compliance requirements, emergency procedures, general cultural requirements and the general availability of labor.

Farm Staff - Contact Information:

□ **Farm Address:** 1256 Poplar Ridge Road, Aurora NY 13026

□ **Farm Supervisor: Paul Stachowski**



- Office Phone: 315-364-8296
- Cell Phone: 315-663-4121
- Email: pjs16@cornell.edu

□ **Back-up Farm Contact:** Jeff Stayton, Field Assistant



- Office Phone: 315-364-8296
- Cell Phone: 315-730-5637

□ **Organic Land Contact:** Betsy Leonard, Organic Coordinator



- Office Phone: 607-255-5428
- Cell Phone: 607-423-8366

Facility Information:

□ The 450-acre farm has both **conventional and certified organic field areas**. A 16-acre parcel of the farm is certified organic.

- Facility resources include a diverse collection of **tractors and implements** for small and medium scale agronomic research. The facility includes spaces for **equipment storage, workroom/lab, pesticide storage, fueling stations, meeting space, drying ovens and a farm shop.**
- **Soil nutrient and pH information** is available for each field, and can be obtained by contacting the farm supervisor.
- **Soils** at the farm are high lime, medium textured soils (Honeoye, Lima, and Kendaia) derived from glacial tills (soil management Group II subgroup II A).
- **Weather data** for this farm is available in print at the farm office and at: <http://newa.cornell.edu/index.php?page=weather-station-page&WeatherStation=aur>
- **Irrigation** is possible for some fields via the use of overhead sprinklers or an irrigation reel-gun. **Hydrants are present along fields M1, N, P1, J and U.** The farm maintains a limited amount of irrigation pipe and related irrigation equipment for use by request.

Map of Facility and Fields:

- A **map of the farm**, including fields, can be found at: <http://cuaes.cals.cornell.edu/farms/maps> .

Expectations:

- **Sustainability is a cornerstone** of how we operate research farms at Cornell. Please work with CUAES farm staff to encourage sustainable practices within your program and to be good stewards of the resources at your disposal. We are always open to ideas to make sustainable improvements.
- **Be considerate of fellow faculty, staff and students.** Fields, facilities and equipment are shared resources.
- Timing in agriculture is critical. Please consult with the farm supervisor regarding the start and end dates of your research project(s).
- Research field trials must conform to standard dimensions which allow for access of field implements and spray equipment. **Please discuss your plot dimensions with the farm supervisor** in advance of planting.
- **Once a project ends**, remaining crop residue must be incorporated or mowed off. **All non-organic** (e.g. plastic mulch, drip tape, flags) **and large woody materials** (e.g. range poles, corner stakes) **must be removed from the field.**

General Requirements:

- **Vehicle parking** is available along the west side of the main shop/office building. Do not block farm laneways. Access may be limited to fields in late fall, winter and early spring. **Vehicle speed should not exceed 10 MPH on farm laneways and 5 MPH around the farm building complex.**
- Use of **shared building spaces, equipment and shop tools** must be coordinated by the farm supervisor. No tools or equipment are to leave the farm without the farm supervisor's approval.
- After use, **equipment and implements must be cleaned of soil and debris. Equipment should be returned to its original location** as soon as possible such that other programs can access shared equipment in times of high demand. Sprayers, fertilizer applicators, seed boxes etc. should be emptied after use and cleaned out appropriately. If you stop using equipment part-way through an application,

but will use it again shortly (e.g. the next morning), label what materials are left in the equipment, and include your name and date.

- **Special rules apply for organic field operations.** Equipment to be used on the organic fields must be clean of soil, prohibited materials and crop residues prior to entering organic fields. **A wash station is located adjacent to the Pesticide Storage building.** Field operations and equipment clean outs/washing must be recorded in the organic field book located in the Musgrave conference room. Use organically grown seeds or untreated, non-GMO seeds (after checking and documenting 3 sources) and materials/amendments listed on our approved product list (in the Organic Field Book). Please direct any questions to Betsy Leonard, 607-423-8366 or bai1@cornell.edu.
- **Safe use of farm equipment is mandatory.** All technicians and faculty using CUAES farm equipment must attend an **annual on-farm tractor safety course** to be offered each spring, in cooperation with the N.Y. Center of Agricultural Medicine and Health (NYCAMH). To become certified to drive tractors, **new operators must first pass a written and an in-the-seat tractor exam** demonstrating their ability to operate a tractor capably and safely. **Experienced and certified program technicians and/or faculty are then responsible for the proper training of all necessary equipment operators for their program.** Learn more about the [Tractor Certification Process](#). The Farm Manager has the authority to prohibit or restrict on-farm tractor usage by any individuals that are found to operate equipment in an unsafe or reckless manner. **If you are not comfortable with the operation or function of a piece of equipment, stop and see the farm manager or farm staff.** If something seems faulty with a piece of equipment, stop and see the farm manager or staff immediately.
- **Department of Transportation (DOT) regulations impact all drivers** intending to use the following Musgrave farm vehicle, with a GVWR of >10,000#: Ford F250 Pickup. **Additional driver testing and compliance measures are required;** please see the farm supervisor for details.
- All crops that are not harvested for research, or treated with unregistered materials, are the farm's property and may be sold by the farm to subsidize applied research at CALS.
- **All individuals supporting research on the Musgrave farm, where crops may be treated with pesticides, must have completed Worker Protection Standard (WPS) training. In addition, all individuals applying pesticides must also be licensed as a NYS applicator or working under the direct supervision of a NYS applicator.** More information is available at: <http://oeh.cals.cornell.edu/pesticides/>.
- Individuals cleared to **use shop areas must comply with all applicable EH&S regulations**, including demonstrated competency with tool operation, proper eye and ear protection and completion of hot work permits (if applicable).

Emergency Procedures:

- **In case of a life safety emergency, call 911** from any land line or cellphone. A land line is present in the farm shop, hallway by the drying oven room, and the office of the farm supervisor. The farm supervisor should be informed ASAP of all on-farm emergencies/accidents, including non-critical incidents.
- **Fire Extinguishers** are present in all facilities, fixed to the wall in prominent locations.
- Projects are responsible to carry **first aid kits** for their use while at the farm. A first aid kit is also located in the **farm shop**, next to the sink, as a backup option. An **Automated External Defibrillator (AED)** is located in the field house hallway in front of the farm office door.

- Projects are responsible for providing appropriate **personal protection equipment (PPE)** to their staff and students. Individuals operating equipment, including hand tools (e.g. hoes) must wear closed-toe footwear.
- **Essential postings** for the farm, including information on recent pesticide applications and labor regulations can be found on the bulletin boards next to the entrance door to the farm shop.
- The farm is in compliance with Spill Prevention, Control, and Countermeasure (SPCC) Rules, specifically in regards to petrol tanks. **Individuals using farm fueling stations must be aware of the location of spill kits and what to do in case of an accidental spill.** More information on SPCC requirements can be found at: <http://www.epa.gov/oem/content/spcc/>. All spills should be immediately reported to the farm supervisor.

Cultural Practice Requirements:

- **Pest management is critical** to avoid negative impacts to your and other projects. **Active scouting for pests – insects, diseases and weeds – is the responsibility of each project.** Projects should have a management plan in place for common pests and work closely with the farm supervisor. Projects with specific pest requirements (e.g. a late blight screening trial) may require isolation.
- Research on **regulated genetically-modified organisms (GMOs); heavy metals; planned disease and insect releases, or; involving the use of radioactive isotopes, animals, or aerial drones**, must be pre-screened for strict compliance with Cornell policy and to assure that such work will not impact the safety of other farm users or the robustness of neighboring research. **The farm supervisor must be notified prior to use.** The Cornell policy library is available online at <https://www.dfa.cornell.edu/tools-library>. More information and contacts for Cornell Environmental Health & Safety can be found at <http://sp.ehs.cornell.edu/Pages/Home.aspx>.
- The Musgrave farm has a variety of **tillage implements for field preparation**, including moldboard, minimal and no-till equipment. Please work with the farm supervisor to select the tillage practice that best aligns with your project.
- Farm staff maintain baseline **fertility levels** for most farm fields. Farm staff can source and provide common fertilizer formulations to projects when advance notice is given, including compost for organic fertility.
- Field assignments must be made in consultation with the farm supervisor, who can provide relevant historical information on fields.

Labor Availability:

- Farm staff at Musgrave include the farm supervisor, one field assistant, and a seasonal temporary employee. **The farm staff endeavor to meet all requests for general agronomic services and support.** Our aim is to provide world-class support of the applied research, teaching and outreach goals of Cornell faculty. **Labor is not, however, infinite.** As such, farm staff may occasionally have to decline or delay the provision of services which fall outside their scope of duties or when available labor is simply insufficient.