

Farm Service Standard Operating Procedures

(An outline of services provided to Horticulture Faculty by the Horticulture Teaching and Research Center)

Upkeep of the facility is the farm staff's main responsibility. However, as labor and time permits, additional services will be provided. Historically, the staff has been very accommodating to projects at the farm. The faculty voted on January 6, 2005 to implement a farm service fee on research projects at the HTRC. Federal regulations require the department to charge actual costs to projects, which means a rate cannot be guaranteed before the season begins. We will try to keep expenses on projects in the following ranges. For low use projects, \$0-\$1,300; medium use projects, \$1,301-\$3,000; and high use projects \$3,001-\$5,000. Please use these figures to budget an appropriate amount of funding toward your project fees. No project will be charged more than \$5,000.

I. Project Requests

Project personnel will need to complete one of two application forms before beginning a project at the farm. These applications are available on the farm's website (please see the section titled Project Forms), or by contacting Bill Chase (chasew@msu.edu).

- A. **Field Projects Form:** This form is used to provide detailed information pertaining to field needs.
- B. **Plant and Cooler Form:** This form helps secure needed resources and tracks miscellaneous usage of farm supplies.

II. Field Setup and Assistance

- A. **Land Assignment:** The majority of land assignments are done in the spring (April/May) of the year.
- B. **Field equipment sign-out** is on a first come basis. Project personnel will need to coordinate usage of the equipment with the farm staff. Equipment availability and sign-out is done at the discretion of the manager. Sign-out information includes the time frame needed, and the usage site (if it is used away from the main farm). If equipment is not used within the first hour of sign-out, it can be reassigned to the next user. All mechanical failures need to be reported to farm staff as soon as possible.
- C. **Land Preparation** will consist of a primary tillage (moldboard or chisel plow) and secondary tillage (disc or field cultivator). Farm staff will provide a final tillage as time permits. Otherwise, it is the responsibility of project personnel to complete this task.
- D. **Fertilizing:** The following fertilizers are available during the growing season. Large quantities of a balance blend are available in late April to the middle of May (1-1-1 ratio of N/P/K or Potash (0-0-60) is normally used). One application of these fertilizers is made starting in early April. Other fertilizers, which are available in smaller quantities, consist of a balance blend and ammonia nitrate (34-0-0).

These bagged fertilizers are available in limited quantities and will be applied by Horticulture Farm staff or project personnel.

- E. **Irrigation:** Travelers, solid set, trickle, and container pad irrigation are used to water crops.
1. Travelers: When possible, travelers are preferred to irrigate larger areas. (Contact farm staff for most effective dimensions.) Traveler setup is done by farm staff. If irrigation is needed beyond the normal working day, project personnel will be needed to shut off the machine and pump.
 2. Solid set: To supplement the travelers, solid set irrigation is used. Usually, farm staff will setup and initially start the layout. It is possible that assistance will be needed to setup, periodically move, and remove pipe at the end of the season. **Please be aware of solid set irrigation as you drive around the farm.** Many times it can be difficult to see, and is easily damaged when driven across.
 3. Trickle irrigation has been increasingly used in past years as part of HTRC's water conservation efforts. Please contact the farm manager to discuss setup and installation of a trickle irrigation system for your project.
 4. Container pad irrigation operates on a schedule using a timer on the farm well. Tom Fernandez (fernan15@msu.edu) sets up the clock, and posts the operating times at the central location.

According to guidelines set forth by the Michigan Department of Agriculture, HTRC is required to estimate the amount of water used to irrigate crops. To assist us in calculating water usage, there are small cards located at the central location (407B) that can be filled out, which include the needed information. We ask that project personnel complete one of these cards **every time** their project is irrigated. Completed cards can be placed in the labeled envelope at the central location.

- F. **Pest Control:** Pest control is a cooperative effort between the farm staff and project personnel. All pesticides need to be applied by a commercially certified applicator for the appropriate crops. The manager will need a copy of the applicator's pesticide license on file, as he is liable for this information. Applications must be recorded and posted according to the Michigan Department of Agriculture, and EPA guidelines. Two scheduled dates in early May and June (as well upon request) are available to review worker protection standards and posting procedures.
1. Insect and disease control: "Air blast" equipment is used for larger crops and areas. Farm staff will operate the air blast equipment. Applications are made on either an "as needed"

basis (large fruit and ornamentals), or on a weekly schedule for vegetables (Thursdays are the targeted date). The farm staff will assist smaller plots as time permits. All other applications will be done by licensed project personnel.

2. **Weed control:** For perennial crops, one pre-emergent and one post-emergent spray per year of “stock” herbicides is available . See manager for available herbicides. Project staff will need to provide “non-stock” herbicides. For annual crops, weed control to larger areas will be applied by farm staff. Project personnel are responsible for other areas.
- G. **Planting:** Various planters are available to assist with the establishment of crops. Available equipment includes: Veggi-MACC Vacuum Planter, Mechanical Transplanter, Moore Unidrill, Tree Spade, and various hand planters. Farm staff may assist with the setup of planters.
- H. **Yield Data:** To assist in completing crop census information, HTRC asks that researchers provide approximate yield data for all crops no later than December 31. Acreage used and percent of experiment that was harvested also needs to be included with yield information.
- I. **Plastic Laying** is done by project personnel or Horticulture Farm student help. Small quantities of plastic may be available upon request. Removal of plastic is the responsibility of project personnel and must be completed by mid to late September.
- J. **Genetically Modified Plant Materials:** Investigators using genetically modified plant materials are required to speak with the manager concerning security, containment, isolation, and disposal of project materials before beginning their projects.