

Plant Research

Plants present unique containment challenges not encountered with microbial pathogens. Please refer to the [Biosafety Manual](#) for more information and resources. There is a comprehensive appendix that discusses plant biosafety and research.

In accordance with accepted scientific and regulatory practices of the discipline of plant pathology, an exotic plant pathogen (e.g., virus, bacteria, or fungus) is one that is unknown to occur within the U.S.

Determination of whether a pathogen has a potential for serious detrimental impact on managed (agricultural, forest, grassland) or natural ecosystems should be made by the Principal Investigator and the Institutional Biosafety Committee, in consultation with scientists knowledgeable of plant diseases, crops, and ecosystems in the geographic area of the research.

Four Plant Containment Levels (P 1 – 4) add increasingly stringent measures and are similar to biosafety levels. Each Plant Containment Level has the following form:

- Standard practices
- Special practices
- Equipment (primary barriers)
- Facilities (secondary barriers)

The United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) permits are required for infectious agents of livestock and biological materials containing animal products, particularly livestock material.

<https://www.aphis.usda.gov/aphis/ourfocus/importexport>

Plant Protection and Quarantine (PPQ) regulates the importation of plants and plant products under the authority of the Plant Protection Act. PPQ maintains its import program to safeguard U.S. agriculture and natural resources from the risks associated with the entry, establishment, or spread of animal and plant pests and noxious weeds.

Permits

- [Organism and Soil Permits](#)
- [Plants and Plant Products Permits](#)
- [Transit Permit Information](#)

Permit Conditions are issued to you on your permit form. The PPQ inspector will review each one of these conditions with you during site visits.

The most common unsatisfactory findings during a site visit are:

1. Written SOP (standard operating procedure) is not available/or lab is not following the SOP
2. Autoclave is not calibrated annually
3. Record keeping is not in compliance with the permit
4. PPQ was not notified of a laboratory relocation PRIOR to the move
5. Research has stopped but PPQ has not been notified
6. Permit holder has left campus without notifying PPQ office
7. Safety training is not up to date