NCPN Facilities

Standards & Assessments
General Considerations

- Physical facility attributes
- Operational processes
Physical Facility Attributes

- Location (proximity to hazards)
  - Natural
  - Artificial
- Size
- Design and materials (contain or exclude)
- Access and security
- Equipment
- Signage
General Facility Structures

- Laboratories
- Growth Chambers
- Greenhouses
- Screenhouses
- Foundation Plantings
Laboratories

- **Design and materials (impenetrable to target pests)**
  - Walls, ceilings and floors (withstand repeated cleaning and decontamination)
  - Doors (locking and self closing)
  - Windows (non-operable)
  - Plumbing, mechanical and electrical

- **Equipment (calibration and maintenance)**
  - Biosafety cabinet
  - Autoclave
  - Growth Chamber
Greenhouses

- Glazing (durable)
- Floors (impenetrable)
- Drains (Divert contaminated water to treatment system)
- Doors (self closing with locks)
  - Vestibule or air-lock
- Ventilation (screened)
- Benches (easy to sanitize)
Foundation Plantings (Pest exclusion)

- Screenhouses
  - Mesh size
- Field blocks
  - Proximity to other hosts
  - Regular monitoring and diagnostics
Operations (SOPs)

• Work flow and processing of infected material
  – Diagnostics and therapy
  – Separation of clean material from infected material and pathogens
  – Final disposition of infected material
• Sanitation
  – Sterilization or decontamination of waste, tools and equipment
• Pest monitoring and management
• Training and continual improvement
• Records and documentation
• Planning
• Health and safety
  – PPE
  – Personal hygiene
• Restricting access to authorized personnel only
  – Security
Standards for NCPN Centers

- What are the minimum requirements?
- Create a cross network NCPN working group
  - Grapes
  - Fruit trees
  - Citrus
  - Hops
  - Berries
- Request NCPN funds
- Opportunity for Accreditation and/or Certification
Assessments

• Inspections/Audits
  – APHIS responsibility
  – Requirement for facilities in possession of plant pathogens from foreign sources
  – Check list based on standards

• Evaluation of the findings from the inspection/Audit
  – Validate that standards are met
References

- USDA APHIS Containment Facility Guidelines for Viral Plant Pathogens and their Vectors
- Design and Operation of Post-Entry Quarantine Stations for Plants (Draft ISPM)
- A Practical Guide to Containment: Plant Biosafety in Research Greenhouses (Virginia Tech University)
- Containment Standards: Facilities Handling Plant Pests (Canadian Food Inspection Agency)