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Leveraging Alternative Service Delivery in Plant Health Science and Technology

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USDA-APHIS-PPQ SCIENCE & TECHNOLOGY

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Examples of Alternative Service Delivery

- Cooperative Agreements
- National Networks
- Federal/ State/ Industry Collaboration

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APHIS-PPQ Cooperative Agreements

Purpose

To enter into mutually beneficial collaborative relationships with a wide range of partners, States, universities, and non-profit organizations:

- to cooperate on plant pests and pathogens of joint interest,
- to increase program impacts while reducing redundancies,
- to share in program authorities and responsibilities, and
- to join and leverage resources for maximum impact.

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Cooperative Agreements

- **Main Authority** – About 20 statutes consolidated into the Plant Protection Act of 2000
  New Authority and Funding Laws – The Farm Bill of 2008/2014. Under Section 10007, APHIS provides funding to strengthen the nation's infrastructure for pest detection and surveillance, identification, and threat mitigation, while working to safeguard the nursery production system.

- **Magnitude**
  - Over 700 Agreements, Grants, and Contracts Annually
  - All 50 States and U.S. Territories, all Land-Grant Universities, many other colleges, non-profits, and industry
  - About USD $160 million in annual funding

- **Benefits**
  - Local authorities authorized via agreements to conduct pest surveys and handle national and regional issues of mutual concern
  - Reduced program redundancies; increased needs covered by limited resources
  - Federal funds used to leverage State, university, and other resources
  - Technology transfer

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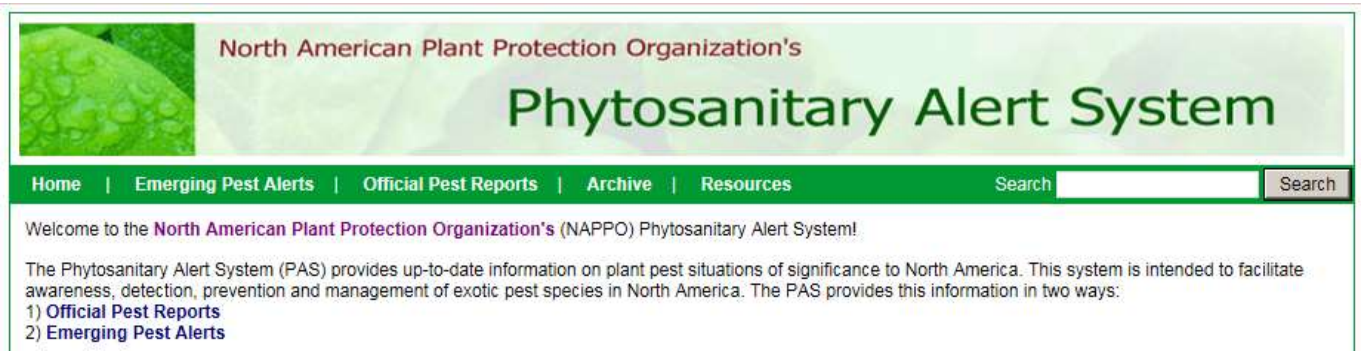
Examples of Alternative Service Delivery to PPQ



North Carolina State University, NSF Center for Integrated Pest Management

- NAPPO Phytosanitary Alert System
- Global Pest and Disease Database
- PestLens
- Commodity Treatment Information System Portal
- New Pest Response Guidelines
- MedHost/Compendium of Fruit Fly Host Information
- Spatial Analytic Framework for Advanced Risk Information Systems (SAFARIS)

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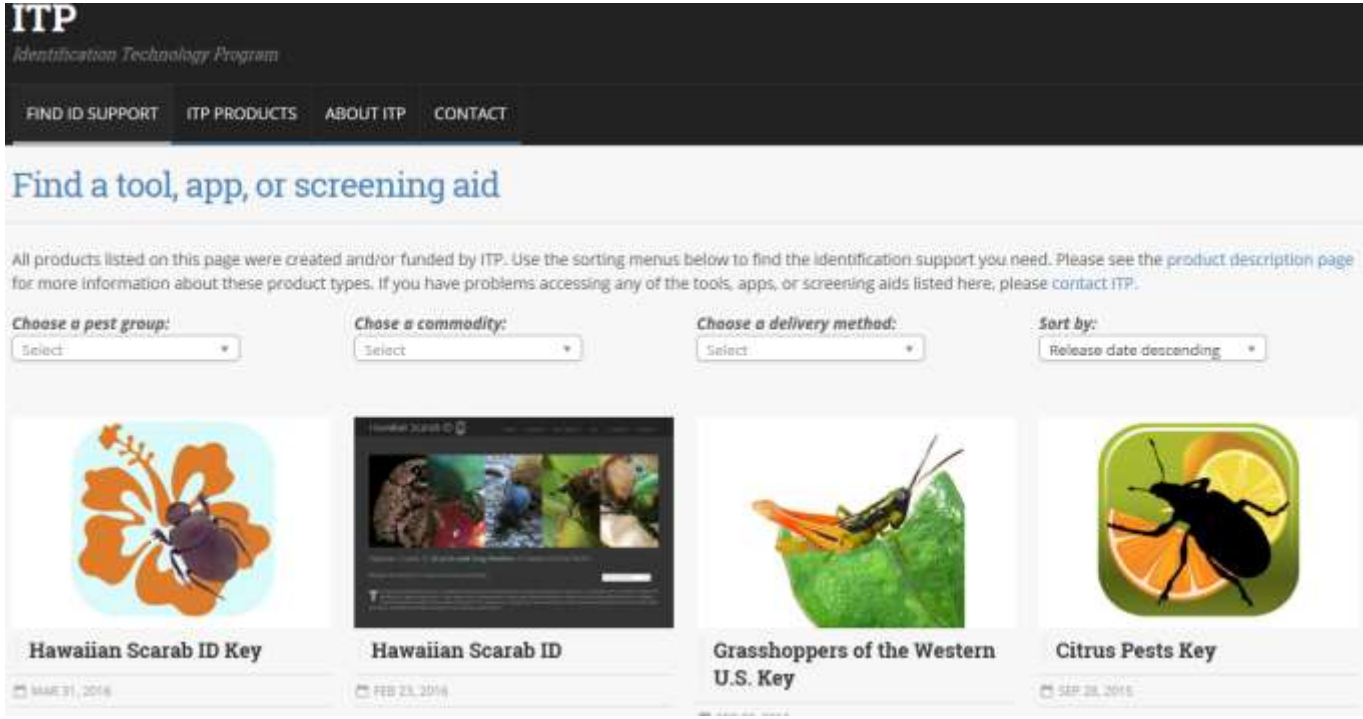
Technology Transfer to and from PPQ

- PPQ Identification Technology Program
  - Coordinates funding, technology support, and outside taxonomic experts to develop pest identification tools
  - Deliver publicly available ID resources
- Biological Control
  - Support exploration and development internally and with partner agencies
  - Transfer methods and organisms to state and federal partners to expand production
    - E.g. Tamarixia production methods (UC, PPQ) transferred to private industry for large scale production



idtools.org

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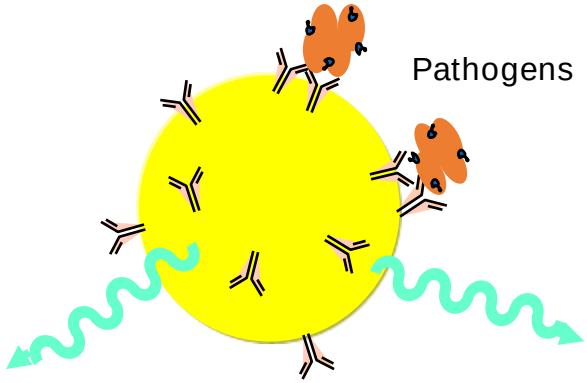
CANARY Detection Technology

- CANARY (Cellular Analysis and Notification of Antigen Risks and Yield); plant pathogen assays developed in collaboration with MIT Lincoln Laboratory
- Rapid plant pathogen detection in plant tissue samples
- Laboratory and port applications
- Commercial production of assay B-cell lines and assay kits



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PPQ National Plant Protection Laboratory Accreditation Program

- Partnership with National Plant Diagnostic Network and state agricultural laboratories
- Evaluates laboratories that use molecular diagnostics for PPQ to ensure their capability to make accurate diagnostic determinations for regulatory purposes
- Accreditation of non-APHIS labs in 2016 for regulatory diagnostics:
  - 12 labs for Huanglongbing
  - 11 labs for Plum pox virus
  - 15 labs for *P. ramorum*

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National Plant Protection Laboratory Accreditation Program

Provides

- Proficiency testing for labs and diagnosticians
- Expertise and funding for quality management capacity building
- Regulatory diagnostic training

Benefits

- Greatly increased regulatory diagnostic capacity for ongoing programs
- Distributed national network ready for emergency situations

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Diagnostics and Standards

- CPHST Beltsville Laboratory
  - 3rd party ISO 17025 accreditation; standard for testing and calibration laboratories
  - ISO 17043 accreditation in process; standard for proficiency test providers
- National Plant Diagnostic Network developing STAR-D Quality Management Program; focused on plant diagnostics quality management

System for True, Accurate & Reliable Diagnostics

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National Clean Plant Network

NCPN Mission

The NCPN produces and distributes asexually propagated plant material free of targeted plant pathogens and pests to ensure the global competitiveness of specialty crop producers and protect the environment.

Core Activities

- Networking and Governance
- Plant Introduction
- Diagnostics
- Therapeutics
- Foundation Plantings

NCPN Establishment

Law: Farm Bill 2008/2014

Collaboration: Consult with States, Industry, and Universities

Efficiencies: Leverage Capacities with Existing Clean Plant Centers; Federal, State, and Universities

Funding – $5,000,000 each year

Alternative Service Delivery

Governmental Authority

University Capacity

Industry Support

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NCPN Collaboration and Roles

U.S. Government

- Statutory Responsibility
- Core Gov't Lab Capacity
- Delegation by 'Permits'
- Funding

Authority by Permitting

Funding by Granting

Clean Plant Centers

- Shared Program Mission
- Complimentary Lab Capacity
- Industry Interest/Support
- Funding – Internal Use

Shared Mission

Clean Plant Capacity

Industry

- Program Requestor
- Product Recipient
- Clean Nurseries
- Cost Support

Requests for Speed and Efficiencies

Costs for Services Rendered

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NCPN Supported Clean Plant Initiatives

Start clean, stay clean
NCPN
National Clean Plant Network

NCPN FRUIT TREES

NCPN GRAPES

NCPN HOPS

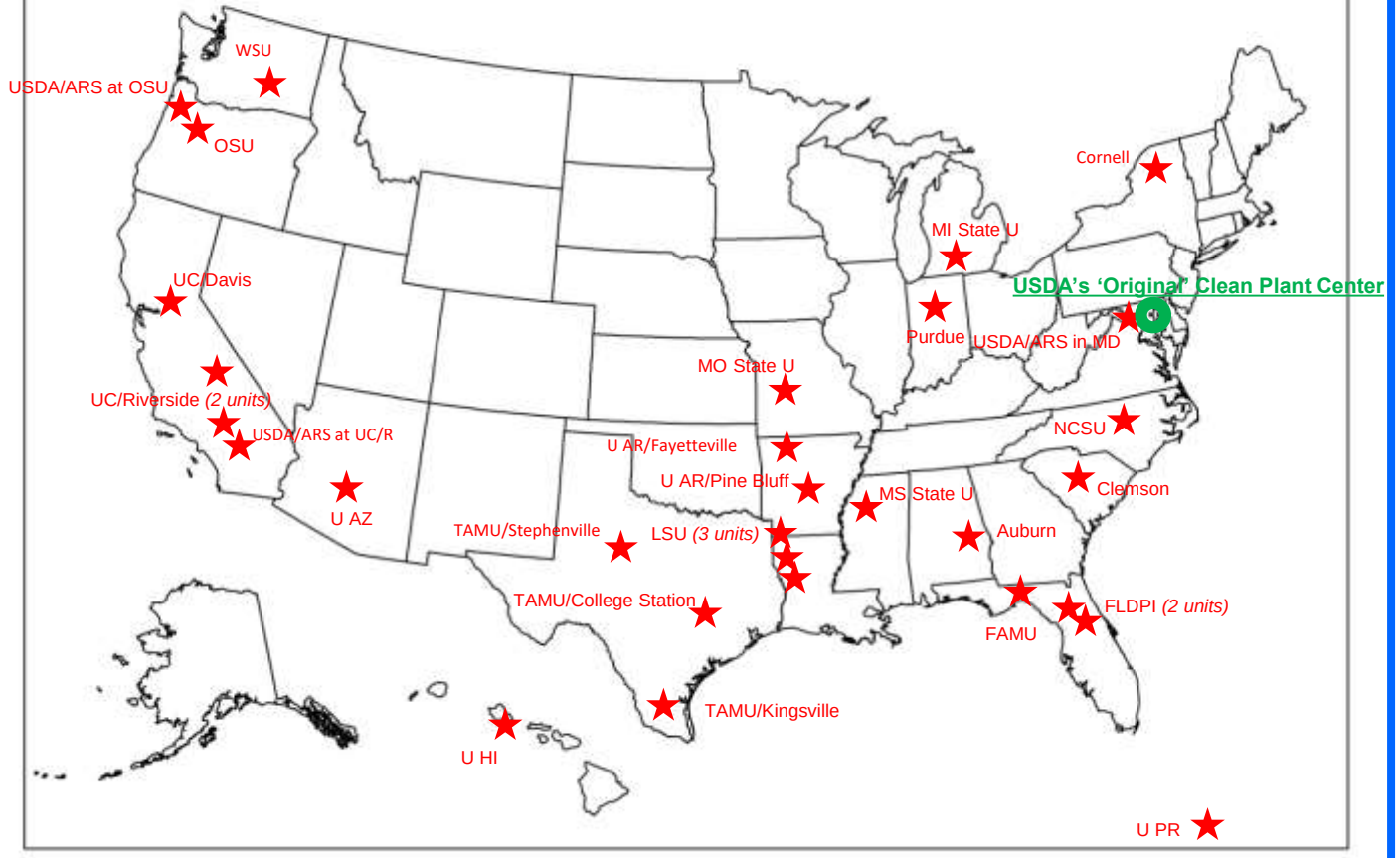
NCPN BERRIES

NCPN CITRUS

NCPN ROSE

NCPN SWEETPOTATO

38 Collaborating Programs located at 27 Centers in 19 States



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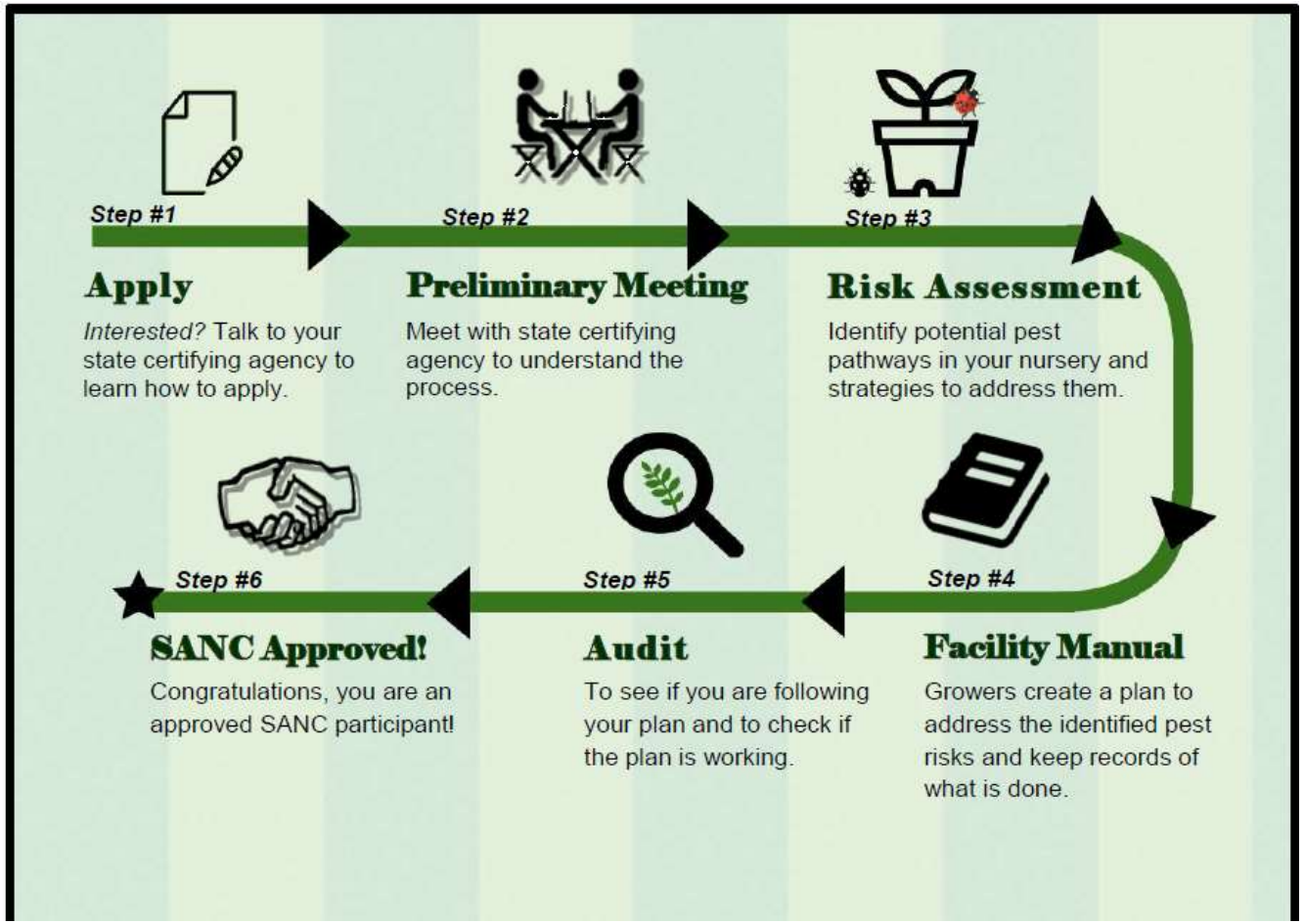
SANC as an Alternative Service Delivery Program

Federal/ State/ Industry Collaboration

The **Systems Approach to Nursery Certification (**SANC) is a voluntary, audit-based initiative among State regulatory agencies with Federal and industry input designed to reduce plant pest risk associated with the movement of nursery stock.



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Systems Approach to Nursery Certification

A Systems Approach Alternative to End Point Inspection

- States come together with the Federal government and industry; delineating authorities and sharing resources.
- Systems for the safe production and movement of nursery stock are discussed, developed, and documented; critical control points are recognized.
- Pilot programs to tests assumptions are launched and assessed.
- Expensive routine inspections are replaced with audits of the system.

Program Benefits

- Expensive, repeated routine inspections are replaced with confirmatory audits of established systems for the processing of plants in nursery systems.
- Industry costs are down, State resources are conserved, and plants move more rapidly among the States.

Questions?