PPQ in Maine and Beyond

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Talk Outline

- USDA APHIS PPQ in Maine
  - Who we are, what we do
- Our role (directly and tangentially) with potatoes
- PPQ's role at the national level

About me

- Plant Protection Technician
- B.S. in Wildlife Ecology, M.S. in Entomology
- Specialties in insect ecology and insect identification
- Role includes:
  - Conducting visual and passive insect surveys
  - Provide identifications of potential insect pests
  - Assist in export/import inspections

Our office

Rachel Nyce
State Plant Health Director
(SPHD)

Carol Murphy
Office Manager

Kaj Thomsen
Plant Health Safeguarding Specialist
(PHSS)

Tony Slowik
Pest Survey Specialist
(PSS)

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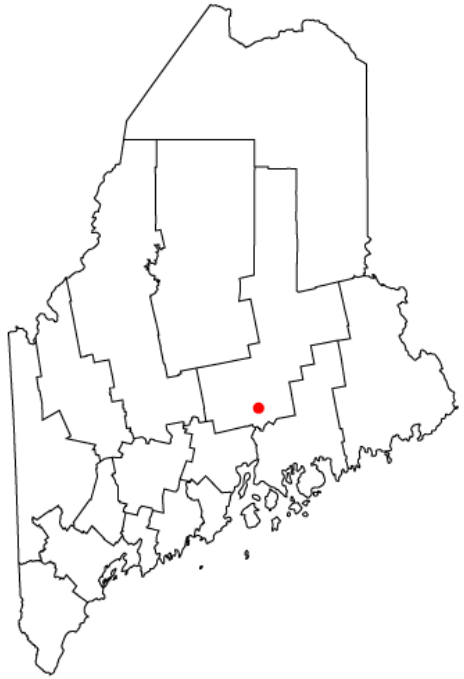
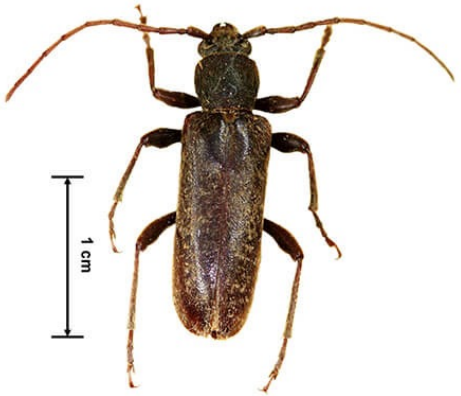
PPQ in Maine

- Primary goals
  1. Protect Maine's plant commodities from disease and invaders
  2. Facilitate commerce (intrastate, interstate, international) while still achieving goal #1
- To achieve these:
  - Conduct statewide exotic insect surveys
  - Conduct visual surveys for invasive insects, plants, and plant diseases
  - Perform inspections of imported/exported plant commodities



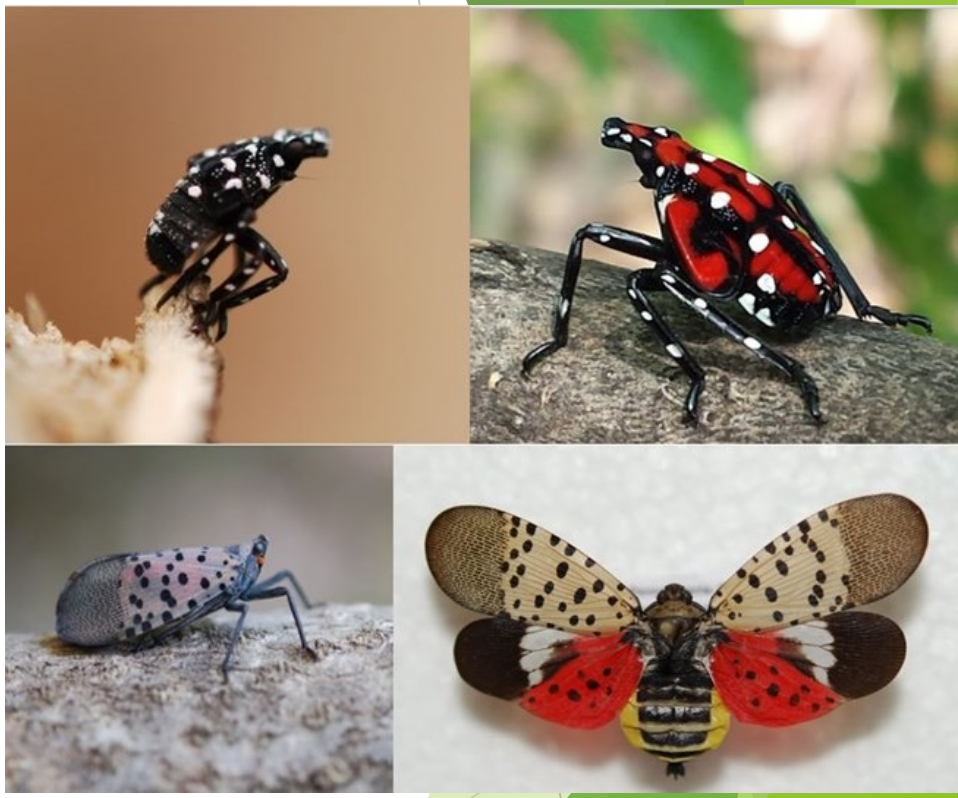
Exotic wood-boring beetle surveys

- Wide drag-net approach
- Cover as much ground as logistically possible
- Bait and survey for exotic wood-boring beetles, like:
  - Brown spruce longhorned beetle
  - Oak pinhole borer
  - Velvet longhorned beetle
  - European spruce bark beetle
- Some samples to Carnegie Museum, others processed in-house



Visual surveys

- In recent years, mostly spotted lanternfly
  - Also, elm zigzag sawfly and Asian longhorned beetle
  - Emerald ash borer in non-infested counties
- For SLF, survey areas with hostplants (mostly grape) and favorable climate
- Target locations with movement of nursery stock



Import and Export Certifications

- PHSS inspects any plant commodity moving internationally or to/from federal quarantine zones
- Logs, lumber, Christmas trees and wreaths, seeds, etc.
- Issue phytosanitary certificates
- Inspect kilns, soil research laboratories, industrial autoclaves for regulated garbage, issue and maintain compliance agreements
- Inspection of potatoes is extremely rare for us


PHYTOSANITARY CERTIFICATE

PPQ's role with potatoes in Maine

- PPQ has a Memorandum of Understanding (MOU) with Maine DACF
- MOU effective for 5 years
- State is given ability to inspect imports/exports of potato commodities for cooperative pest/disease prevention
- Must meet federal standards
- In other states, PPQ does most inspections. Maine is a special case

Reasoning for the MOU

- Logistics
  - Maine PPQ is a small office
  - Centrally located, so not close to most potato operations
  - Workload in busy season is exceptionally great, another office would be needed
- Expertise
- State tends to be more nimble
- Less risk of transmission of disease, such as ringrot

PPQ’s occasional role

- PPQ export specialists can provide support and guidance
- Provide regulation, guidance, and testing requirements for potato commodities from regulated areas
- Potatoes sometimes submitted to Hermon office for testing

PPQ at the national level

- When pests or diseases are detected, PPQ may established and enforce a federal quarantine
  - Movement out of or through quarantine zones are subject to federal regulation, even if movement is intrastate
  - Pests and diseases are “deregulated” only after there is deemed to be no more significant threat
- Some examples:
  - Pale cyst nematode (PCN, *Globodera pallida*)
  - Golden nematode (*Globodera rostochiensis*)

Pale Cyst Nematode

- Program established upon detection in Idaho in 2006
  - Quarantine established in 2007
  - Federal survey and sampling guidelines established in 2009
- PCN, along with other potato cyst nematodes, can cause 20-70% yield loss
- Transmitted by soil
- When host plants are absent, nematodes survive as cysts
  - Each cyst can contain up to 500 eggs
  - Can withstand most chemical treatment
  - Can survive 30 years without host plant in optimal conditions

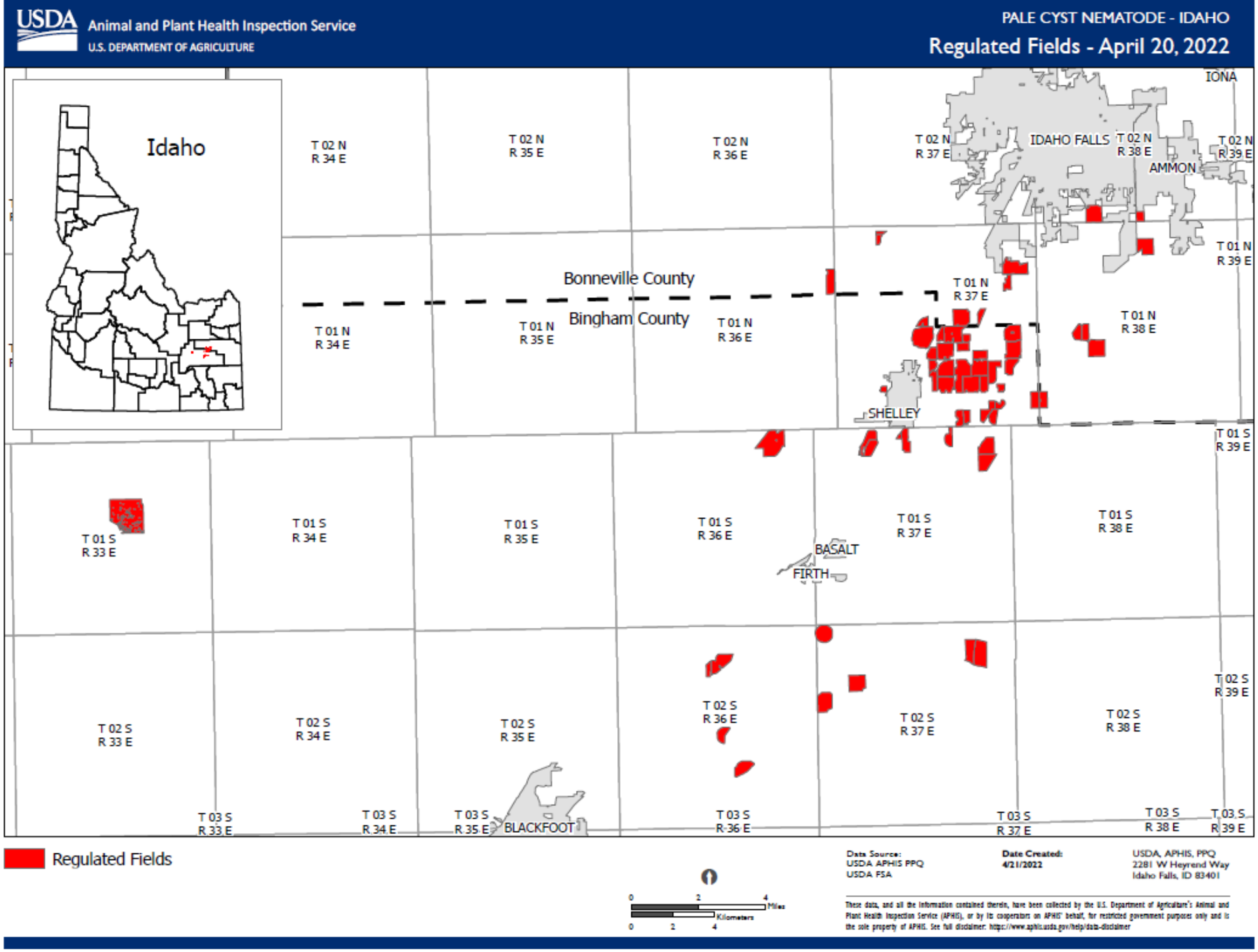
Pale Cyst Nematode

- Impacts on commerce following detection:
  - Canada, Mexico, Korea ceased importation of potatoes from Idaho
  - Japan ceased importation of potatoes from entire U.S.
- Canada, Mexico reopened in 2007 for potatoes outside of quarantine area
- Korea reopened in 2010 for potatoes outside of infested counties
- Japan reopened to non-Idaho potatoes in 2007, fully reopened in 2017
- Establishment of federal quarantine and extensive surveys helped markets reopen

Pale Cyst Nematode

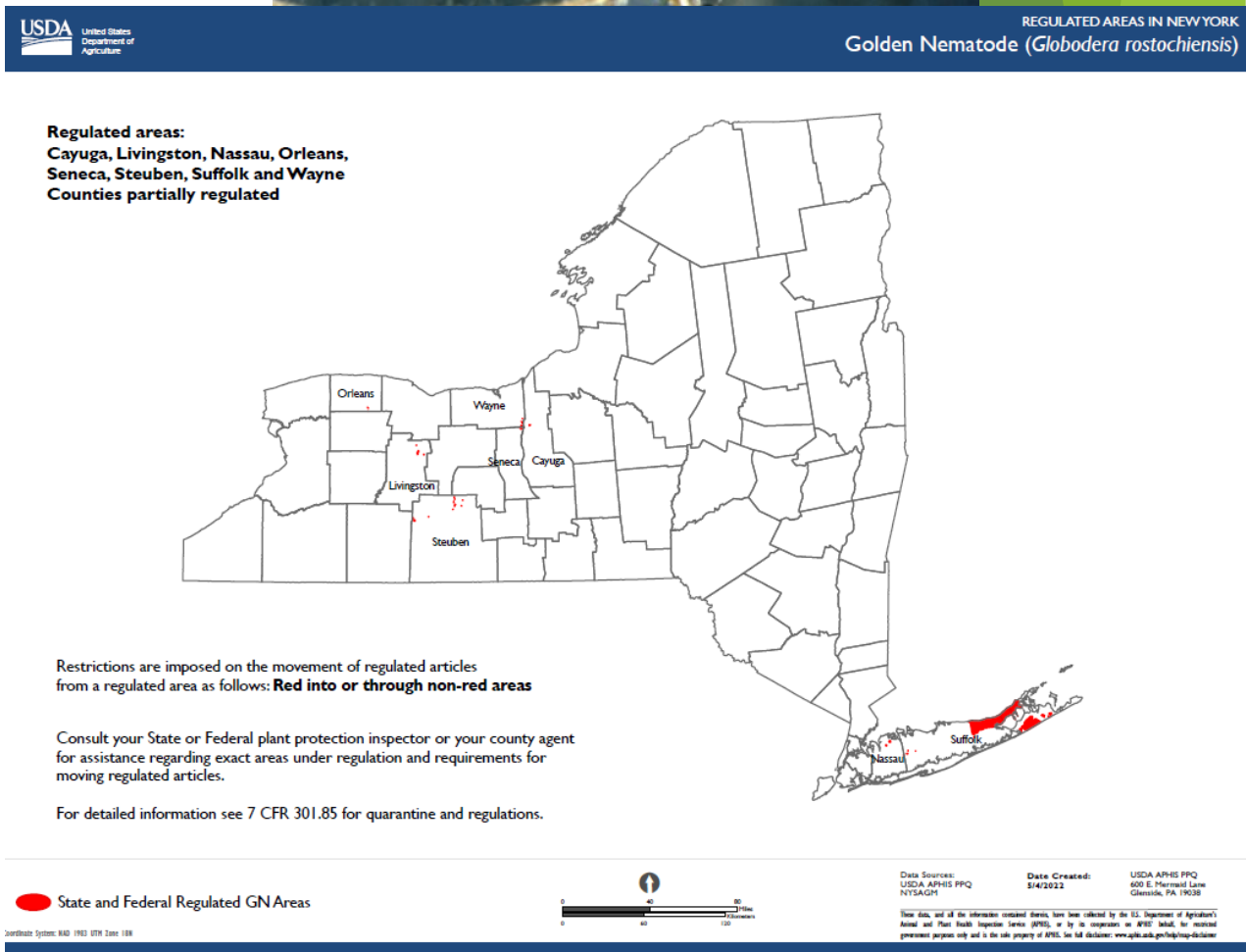
- Publish quarterly program updates
- Field sampling programs pulls PPQ field operations employs nationwide
  - Soil sampled from infested fields, associated fields, and surrounding area
- If sample is positive, field is quarantined and fumigated
- Cysts are collected, tested for viability
- Greenhouse bioassay conducted
- Field can return to potato production, still with regulation and testing
  - Full-field surveys for three subsequent crops
- Currently, regulated area is 6,568 acres (down from ~55,000 at peak)

- Regulated area is <1% total production area in Idaho



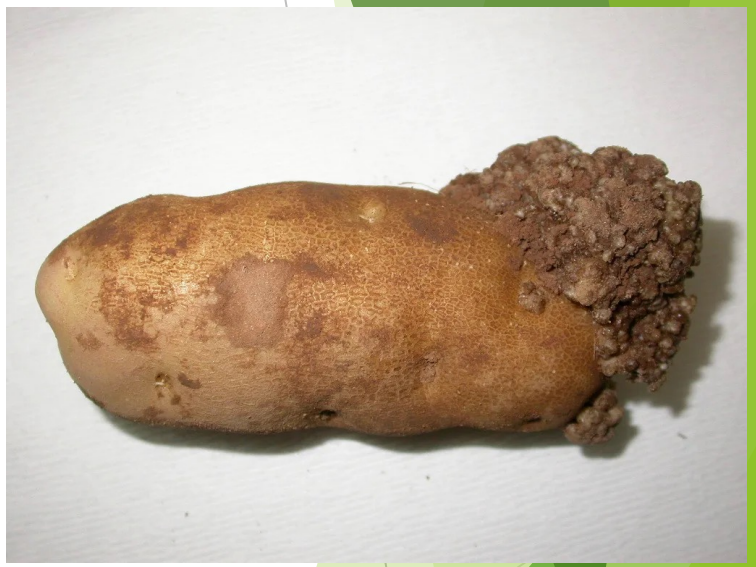
Golden nematode

- Detected in New York in 1941
- Similar in impact to PCN
- However, quarantine measures and rotation of resistant potato varieties have contained golden nematode
- 90,307 acres regulated, with 5,945 considered infested
  - Since 2010, over 1M acres removed from regulated area



Potato wart

- Regulated by APHIS as a Select Agent
- Federal order on U.S. imports of potatoes from PEI
  - Enacted April 1, 2022
- Field-grown seed potatoes prohibited
- Potatoes for consumption allowed if meet specified conditions



Some APHIS resources

- All program information available online
  - Updates, maps, regulations, historical records
- APHIS website houses all pest programs (aphis.usda.gov)
- APHIS Stakeholder Registry
  - Sign up to get email or text updates on topics of interest
  - For potato pests and diseases:
    - Select Plant Health in the US (Domestic) > Pest Management > Potato Pests and Diseases
- Hermon PPQ Office: 207-848-0001
  - Or contact SPHD: rachel.s.nyce@usda.gov

Thanks

Any
questions?