

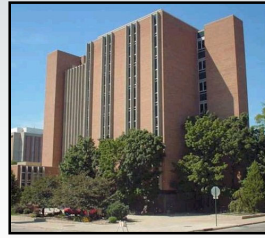
Fri@4

Fun and Games at the PDDC!

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University of Wisconsin-Madison/Extension



Fun and Games at the PDDC! Location



- Russell Labs
- Labs: Rm. 183, Rm. B37
- Office: Rm. 276

Fun and Games at the PDDC! Staff

- Brian Hudelson (Director/Diagnostician)
- Sue Lueloff (Assistant Diagnostician)
- Dixie Lang (IT/website/social media support)
- Ann Joy (data entry)
- Alex Mikus (student hourly)
- Gisele Guzman (AVID/TOPS high school intern)
- Honorary PDDC staff
 - Laurie Ballentine (clerical support)
 - Andy Witherell (molecular expertise)



Fun and Games at the PDDC! Diagnostic Services

- Sample types
 - Physical samples (preferred)
 - Digital photos (as supplements)
- Diagnostic methods
 - Classical (culturing, moist chambers, microscopy, bioassays, etc.)
 - Serological (ELISA, dip sticks)
 - Molecular (PCR, DNA sequencing, cloning)
- Reporting methods
 - Written letter
 - Email (on request)
 - Phone (critical diagnoses)



Fun and Games at the PDDC! Molecular Diagnostics

- *Agrobacterium tumefaciens*
- *Bretziella fagacearum*
- Carlaviruses (genus and hops species)
- *Clavibacter michiganensis* subsp. *sepedonicus*
- *Dickeya dianthicola*/D. *didantii*/D. *solani*
- *Pectobacterium carotovora*/P. *atrosepticum*/P. *wasabiae*
- *Phakopsora pachyrhizi*
- Phytoplasmas (including cloning)
- *Pseudoperonospora humuli*
- Tobacco rattle virus
- *Verticillium* spp.
- *Xanthomonas* spp.



Fun and Games at the PDDC! Diagnostic Fees

- Base fee: \$20
- Culturing fee: \$5 per medium per plant part
- Serological test fees
 - Dip stick: \$8
 - ELISA: \$35
- DNA/RNA test fees
 - \$35 for the first PCR reaction (includes extraction costs)
 - \$15 for each additional PCR reaction
 - \$35 for DNA sequencing



Fun and Games at the PDDC! Diagnostic Fees



- **Soil test fees**
 - Alfalfa *Aphanomyces* race bioassay: \$150
 - Pea root rot bioassay: \$75
 - Quantitative *Verticillium* soil assay: \$75
 - Soybean cyst nematode soil assay: \$35
- **Free diagnostics: \$0**
 - Digital samples
 - High economic impact disease samples: late blight
 - Regulated disease samples: Boxwood blight, SOD, Ralstonia wilt
 - Needs-based samples: individuals, schools, non-profits
 - Educational samples: Extension staff

Fun and Games at the PDDC! Diagnostic Revenue



	2018	2019
• Sample fees	\$33,530	\$48,308
• Miscellaneous fees	\$3,237	\$3,935
• NPDN grant	\$45,454	\$45,454
• Extension S&E	\$10,000	\$0
• Departmental funds	\$5,500	\$500
• TOTAL	\$97,721	\$98,197
• Free diagnostics	\$4,970	\$7,388
• Delinquencies	\$480	\$2,968

Fun and Games at the PDDC! Diagnostic Samples



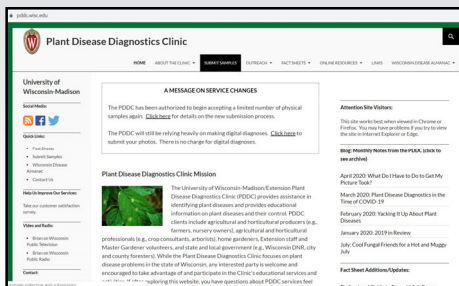
- **Total samples 2019: 1506**
 - Trees and shrubs: 47%
 - Vegetable: 22%
 - Field and forage: 8%
 - Herbaceous ornamentals: 7%
 - Fruit: 7%
 - Soil: 4%
 - Specialty crops: 4%
 - Miscellaneous: 1%
- **Average total samples (1999-2019): 1638**
- **Average total samples (1999-2010): 1847**
- **Average total samples (2011-2019): 1358**

Fun and Games at the PDDC! Outreach Programs



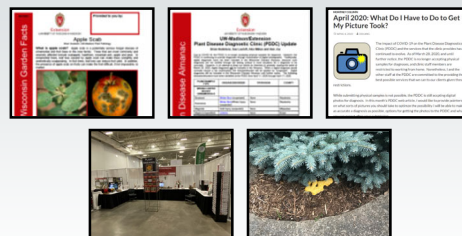
- **Total programs in 2019: 111 in 22 counties**
- **Oral presentations**
 - Master Gardener
 - Ornamental horticulture (consumer and commercial)
 - Fruit and vegetable (consumer)
 - Field and forage crop
- **Booths**
 - Garden & Landscape Expo
 - WMARS Hort Field Day
- **Wisconsin Public Radio and Television**
- **Total contacts: 224,009**

Fun and Games at the PDDC! Web Site



- **Total unique page views in 2019: 34,923**

Fun and Games at the PDDC! Social Media



- **Facebook and Twitter (@UWPDDC)**
- **465 and 330 followers respectively**
- **30,286 and 39,745 impressions respectively**

Fun and Games at the PDDC! Publications



- Fact sheets (260+ titles)
 - Diseases
 - Insects
 - Weeds
 - General Horticulture



Fun and Games at the PDDC! Publications



- Journal publications (first reports)



Fun and Games at the PDDC! Instruction

- PP699: Plant Disease Diagnostics Clinic Practicum
- PP354: Diagnosing and Monitoring Pest and Nutrient Status of Field Crops
- PP559: Diseases of Economic Plants (Ornamentals)
- PP590: Plant Pathology Capstone
- PP300: Introduction to Plant Pathology (Ornamentals)
- PP558: Biology of Plant Pathogens
- PP875: Special Topics (Agricultural Oomycetes)
- PP990: Research (Gina Foreman, Amy Gibbs)
- Hort334: Greenhouse Production of Ornamental Plants
- Hort375: Special Topics
 - Planting for a Greener World
 - Arboriculture and Landscape Maintenance
- Farm and Industry Short Course: Plant Diseases



Fun and Games at the PDDC! WI DNR Phytoplasma Survey



Green Ash
(16SrVII-A)

Black Walnut
(16SrIII/III-A/VII-A)

Chokecherry
(16SrIII-A)



White Ash
(16SrVII-A)



Shagbark Hickory
(16SrVII-A)



Cornus sp.
(16Sr?)

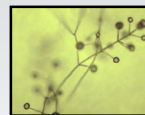


Fun and Games at the PDDC! Koch's Postulates Work



- Industrial hemp
 - *Drechslera/Bipolaris* sp.
 - *Grovesinia moricola* (*Cristulariella moricola*)

Fun and Games at the PDDC! Koch's Postulates Work

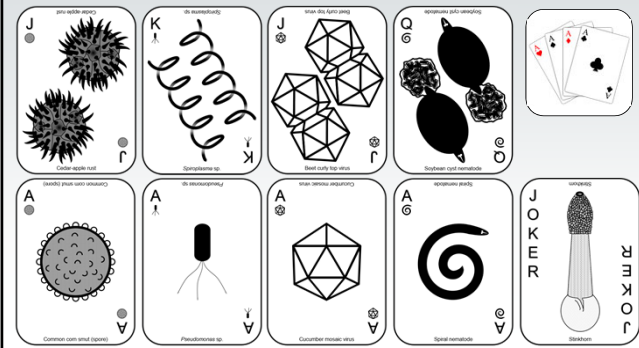


- *Verticillium* spp.
 - *V. dahliae* on woody ornamentals
 - *V. nonalfalfae* on *Verbena* 'Quartz White'

Fun and Games at the PDDC! Plant Pathology Outdoor Laboratory



Fun and Games at the PDDC! PDDC Merchandise - Games



Fun and Games at the PDDC! PDDC Merchandise – Basse Couture



Fun and Games at the PDDC! Questions?

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