The Connecticut Agricultural Experiment Station, Station News, Volume 1 Issue 3, March 2011

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The mission of The Connecticut Agricultural Experiment Station is to develop, advance, and disseminate scientific knowledge, improve agricultural productivity and environmental quality, protect plants, and enhance human health and well-being through research for the benefit of Connecticut residents and the nation. Seeking solutions across a variety of disciplines for the benefit of urban, suburban, and rural communities, Station scientists remain committed to “Putting Science to Work for Society”, a motto as relevant today as it was at our founding in 1875.

Valley Laboratory in Windsor, CT
Photo by Dr. Todd Mervosh
**DEPARTMENTAL NEWS**

**ADMINISTRATION**

**DR. LOUIS A. MAGNARELLI** welcomed visitors of the Northeast Plant Diagnostic Laboratories in Jones Auditorium (February 22); gave opening remarks to the tobacco growers at their annual meeting in Suffield, CT (February 23); and testified to the Appropriations Committee in Hartford by giving a brief report on Experiment Station Accomplishments.

**MS. TESS FOLEY** attended, along with **DR. WADE ELMER** and **DR. MARTIN GENT**, the Connecticut Department of Agriculture’s “Farm to Chef” annual meeting, which was held at the Old Saybrook Inn (~ 225 attendees); participated in networking activities designed to inform all attendees of the food crop research and agricultural services provided by the CAES. Opening Remarks provided by the new CT Commissioner of Agriculture, Mr. Steve Raviczky (January 31); and attended the annual CT Tobacco Growers meeting, hosted by **DR. JAMES LAMONDIA**, in West Suffield. At the meeting, she spoke to the attendees about the CT Agricultural Experiment Station Research Foundation and thanked them for their contributions (February 23).

**ANALYTICAL CHEMISTRY**

**DR. JASON C. WHITE** was interviewed by Ruth Kassinger about phytoremediation for her HarperCollins book on the history of plant physiology entitled “A Garden of Marvels” (February 2); participated in the monthly Laboratory Preparedness Network meeting at the Department of Public Health in Hartford (February 7); participated in the EPA NE Regional Pesticide Roundtable meeting in North Chelmsford MA and presented two lectures entitled “Connecticut Agricultural Experiment Station Department of Analytical Chemistry Laboratory Update” and “Deepwater Horizon Oil Spill Response: Role of the Connecticut Agricultural Experiment Station Department of Analytical Chemistry” (20 attendees) (February 8); presented a lecture entitled “Phytotechnologies: Fundamentals and Mechanisms” at the Harvard University Department of Landscape Architecture (12 attendees) (February 9); participated with Department staff in a FERN Chemistry Cooperative Agreement (CAP) Laboratory conference call (February 10); participated in the FDA FERN training webinar on laboratory accreditation (February 15); attended a lecture at the CT Department of Public Health entitled “Food as a Vehicle for Terrorism: Tetramine and Other Convulsants” (February 17); was invited to be a Keynote Speaker at the 43rd International Union of Physical and Applied Chemistry (IUPAC) biennial Congress in San Juan Puerto Rico this coming July (February 18); participated in a conference call with US FDA on the merging of our Departmental sample database with the federal eLEXNET system (February 22); described the Analytical Department programs and research during a tour of the Laboratory for visitors from the Northeast Plant Diagnostic Network (NEPDN) (20 attendees) (February 23); was interviewed, by Catherine Cooney of the American Chemical Society, for a story on the phytoremediation of PCBs by poplar plants (February 24); described the Analytical Department programs and research during a tour of the Laboratory for teachers from the Future Farmers of America (5 attendees) (February 25); and participated in a conference call of the organizing committee for the upcoming 8th International Phytotechnologies conference to be held in Portland OR this coming September (February 25).

**DR. CHRISTINA ROBB** participated in on-site training on the Thermo Fisher Scientific LC-MS/MS Rapid Resolution Exactive system (February 1-3); participated in FDA Northeast regional FERN conference call (February 8); participated in the FDA FERN training webinar on laboratory accreditation (February 15); participated in a webinar presented by Kevin Schug of UTexas at Arlington entitled “Electrospray Ionization (ESI) for LC-MS (Part 1)” (February 24); presented a lecture entitled “Screening the food supply routinely and in emergencies” to the staff and students of the Chemistry Department of the Western Connecticut State University in Danbury (25 attendees) (February 25); and participated in a webinar presented by Dr. Michael Dong and LCGC publications entitled “Implementing Ultra high-pressure LC (UHPLC): Perspective, Performance, Practice and Potential Issues” (February 28).
DR. BRIAN EITZER participated in on-site training on the Thermo Fisher Scientific LC-MS/MS Rapid Resolution Exactive system (February 1-3); participated in the EPA NE Regional Pesticide Roundtable meeting in North Chelmsford MA (February 8); participated along with Dr. Kimberly Stoner in a conference call with Thomas Steeger and colleagues from the U.S. EPA to discuss research on pesticides and pollinators on (February 7); and gave a presentation on honey bees and pesticides to students from Wesleyan University that were visiting the Station (12 attendees) (February 22).

DR. WALTER KROHL participated in on-site training on the Thermo Fisher Scientific LC-MS/MS Rapid Resolution Exactive system (February 1-3); participated in the EPA NE Regional Pesticide Roundtable meeting in North Chelmsford MA (February 8); participated in a FDA FERN proficiency testing teleconference (February 9); participated in the FDA FERN training webinar on laboratory accreditation (February 15); and was interviewed by Kate Deubert of Publix GreenWise Market for an article pesticide residues on food.

MS. KATHERINE DUGAS spoke briefly about ALB interception in warehouses at the CT Pest Controllers Association Meeting in Jones Auditorium (February 15); assisted with a DEP-run ALB booth at the Northeastern Hunting and Fishing Show at the CT Convention Center in Hartford (February 20); and attended and staffed a display booth about ALB and EAB at the Connecticut Flower Show held at the CT Convention Center in Hartford (February 24, 25, and 27).

MS. ROSE HISKES gave a talk on Pests of the Garden and Forest Pests to the Fairfield Garden Club in Southport (6 adult attendees) (February 17); and along with MS. KATHERINE DUGAS, MS. IRA KETTLE, MR. STEVE SANDREY, MR. PETER TRENCHARD and MS. LISA KACZENSKI, staffed a display booth on forest pests at the Connecticut Flower Show in Hartford (February 24-27).

MR. IRA KETTLE gave a talk on the importance of registering bee colonies in Connecticut, reported on findings concerning last season’s inspections, and spoke with beekeepers concerning beekeeping practices at the Bee School of the Connecticut Beekeepers Association held in Jones Auditorium (155 adult attendees) (February 12); and manned the honey bee display and the Asian longhorned beetle/Emerald ash borer table at the Connecticut Flower Show in Hartford, CT (February 24-27). Once again, the bees were a great draw. Several thousand people filed past the display, with Saturday, February 26, being the busiest day. Citizens once again thanked us for having such a fine and informative display. MS. KATHERINE DUGAS is to be recognized for her work in putting together the beetle display.

DR. CHRIS MAIER visited the American Museum of Natural History in New York, NY, to work on the collection of longhorned beetles (February 8); and displayed entomological literature, including the 1895 field guide titled “Beetles of New England,” at a meeting of the Connecticut Entomological Society held at the University of Connecticut in Storrs (February 18).

DR. GALE E. RIDGE spoke about bed bugs and self-protection to a nursing association in Rocky Hill (45 attendees) (February 15); was interviewed about the increase of bed bug populations in Connecticut by Fox News TV (February 22); spoke about bed bug management to officials from the Danbury Health Department and Housing Authority at Western Connecticut State University in Danbury (30 attendees) (February 22); spoke about bed bugs and self-protection to students at Bridgeport University (58 attendees) (February 23); and discussed the use of beneficial insects in agriculture to a visiting group of Future Farmers of America (10 attendees) (February 25).

DR. CLAIRE RUTLEDGE taught “IPM and insects that attack trees” at an arboriculture class at Bartlett Arboretum in Stamford (15 attendees) (February 10); gave a talk on “Emerald ash borer and Asian longhorned beetle” to the North Stonington Garden Club in North Stonington (40 attendees) (February 15); attended a meeting of the Emerald Ash Borer preparedness com
mittee in Windsor (20 attendees) (February 17); and taught “Insects that attack trees” at the CTPA Arboriculture 101 class held in Jones Auditorium (45 attendees) (February 23).

**DR. VICTORIA L. SMITH** hosted a visit by Isabel Munck and Margaret Miller-Weeks of the US Forest Service, Durham (NH) Field Office, by organizing visits with DR. LOUIS MAGNARELLI, DR. SHARON DOUGLAS, DR. SANDRA ANAGNOSTAKIS, DR. CLAIRE RUTLEDGE and DR. ROBERT MARRA, followed by a visit to the Chestnut Plantation at Lockwood Farm (February 9); along with MR. JEFF FENGLER of the Valley Laboratory and Eric Chamberlain (USDA-APHIS-PPQ), conducted a site visit for establishment of a Post-Entry Quarantine facility in Windsor (February 15); participated in a multi-town meeting of parks and recreation staff, with a presentation on Emerald ash borer, held at the New Haven Regional Fire Training Academy in New Haven (~ 50 participants) (February 17); participated in a tour of CAES facilities by the Northeast Plant Diagnostic Network diagnosticians, organized by Sharon Douglas, with a presentation on the roles and responsibilities of the office of the State Entomologist (26 adult attendees) (February 23); and gave a talk titled “EAB identification, impacts on forests and reporting possible finds” at the annual meeting of the Yankee Division of the Society of American Foresters held at the Middlesex County Extension Center in Haddam (~ 60 participants) (February 25).

**DR. KIRBY C. STAFFORD III** participated in a conference call on the preparation of the EPA Tick IPM Conference scheduled in March (February 3); participated as Administrative Advisor at a meeting of the multi-state collaborative potato breeding project (NE-1031) in Beltsville, MD (16 attendees) (February 7-8); participated in a meeting of the Emerald ash borer working group at the Valley Laboratory (23 attendees) (February 17); spoke on tick management at the NOFA Organic Land Care course at the Save the Bay Center in Providence, RI (32 attendees) (February 22); was interviewed about deer and deer management as an approach to control ticks and Lyme disease by Elizabeth Gehran of the Boston Globe (February 25); and discussed department research and regulatory responsibilities to a visiting group of Future Farmers of America teachers (10 adult attendees) (February 25).

**DR. KIMBERLY A. STONER** spoke on “Movement of systemic insecticides into pollen and nectar” at the Bee School of the Connecticut Beekeepers Association held in Jones Auditorium (155 adult attendees) (February 12); presented the Introduction to the NOFA Organic Land Care Accreditation Course at the Save the Bay Center in Providence, RI (55 adult attendees) (February 17); and presented the Pest Management Overview to the NOFA Organic Land Care Accreditation Course at the Save the Bay Center in Providence, RI (32 adult attendees) (February 22).

**ENVIRONMENTAL SCIENCES**

**DR. PHILIP ARMSTRONG** spoke to a group of plant disease diagnosticians from the Northeast Plant Diagnostic Network about the mosquito surveillance and virus testing program at CAES (February 23).

**MR. GREGORY BUGBEE** gave a *Soils for Arborists* seminar at the Bartlett Arboretum in Stamford (February 3); along with Jordan Gibbons, gave two *Invasive Aquatic Plant Identification* seminars at the CT Envirothon at Connecticut College (February 12); presented a talk entitled *Connecticut’s Invasive Aquatic Plant Problem* at the CT River Museum in Essex (February 17); spoke on “Soil Testing” and “Invasive Aquatic Plants” to students visiting from Wesleyan University (February 22); and spoke on “Soil Testing” and “Invasive Aquatic Plants” to instructors from Future Farmers of America (February 25).

**FORESTRY AND HORTICULTURE**

**DR. JEFFREY WARD** named to Audubon Connecticut - Science Committee (February 15);
and spoke on tree care at a workshop for municipal tree workers of New Haven, Hamden, North Haven, and North Branford (February 17) (50 attendees).

**DR. MARTIN GENT** visited by a class from Sound School New Haven to discuss methods to germinate seeds for hydroponics (6 students and 1 teacher) (February 15).

**DR. ABIGAIL MAYNARD** spoke about the New Crops Program to students from Wesleyan University who were visiting the Station (16 students and 2 teachers) (February 22); assisted Upper School students with their science projects at Hamden Hall Country Day School (26 students and 1 teacher) and assisted the planning of a spring garden for preschool and kindergarten (28 students and 3 teachers) (February 24); and spoke about the New Crops Program to FAA teachers who were visiting the Station (6 adults and 1 child) (February 25).

**DR. WILLIAM NAIL** participated in a Steering Committee meeting of the New England Vegetable and Fruit Conference in Manchester, NH (February 7); presented a lab tour, demonstration, and talk to students from Wesleyan University (16 students, 2 teachers) (February 22); and participated in a conference call meeting of the national Grape Community of Practice (GCoP) hosted by Eric Stafne of Oklahoma State University (February 25).

**DR. SCOTT WILLIAMS** along with MR. MICHAEL SHORT, met with Greg Ecsedy, President Bobbex, Inc. and his sales manager to discuss deer repellent trials (February 9); and met with Connecticut Department of Environmental Protection Wildlife Biologists Judy Wilson and Michael Gregonis, and Great Mountain Forest Manager Jodi Bronson, to discuss habitat improvement and Japanese barberry management (February 17).

**MR. JOSEPH P. BARSKY** attended the Annual Winter Meeting of the Yankee Division, Society of American Foresters in Haddam (February 25).

**Griswold Research Center**

**ROBERT DURGY** taught a University of Connecticut Master Gardener Program class on vegetables in West Hartford, CT (40 attended) (February 16) and in Stamford, CT (31 attended) (February 28); taught Math Calculations and Calibration for Pesticide Applicator’s Training in East Haven, CT (32 attended) (February 24) and in West Hartford, CT (29 attended) (February 22); and presented a workshop entitled Top 10 Vegetable Insects at the CT Farm Fresh Annual Meeting in Glastonbury, CT (13 attended) (February 26).

**Plant Pathology and Ecology**

**DR. SANDRA L. ANAGNOSTAKIS** gave a talk on CAES chestnut work at the Tobacco Grower’s Meeting in Suffield (135 adult attendees) (February 23); and gave a talk on chestnuts at Colonial Day at the Fairfield Museum and helped parents and children plant orchard and timber chestnuts (seed) in pots to take home (19 children and 15 adults) (February 25).

**DR. SHARON M. DOUGLAS** participated in the monthly conference call of the Board of the APS Foundation (14 adult attendees) (February 14); and organized and moderated the CT Tree Protective Association workshop titled “Pesticides—New products for control of old and new problems” held at the Lyceum in Hartford (89 adult attendees) (February 17).

**DR. WADE H. ELMER** co-sponsored the UCONN-CAES Spring Bedding Plant Workshop and presented the talk “Update on emerging diseases, fungicides, and nutrition” in Tolland (17 adult attendees) (February 8); presented his research findings in the presentation “Role of plant pathogens in Sudden Wetland Dieback” at the Connecticut Sea Grant Research Forum held at the University of Connecticut-Avery Point in Groton (22 adult attendees) (February 14); co-sponsored the UCONN-CAES Spring Bedding Plant Workshop and presented the talk “Update
DR. FRANCIS J. FERRANDINO gave a talk titled “Disease risk assessment for southern Connecticut winegrapes using on-site weather data” to visiting students from Wesleyan University (13 adult attendees) (February 22); and gave a talk titled “Disease risk assessment for southern Connecticut winegrapes using on-site weather data” to diagnosticians from the Northeast Plant Diagnostic Network (26 adult attendees) (February 23).

MS. MARY K. INMAN gave a talk titled “Maintaining healthy perennials” for the Caudatowa Garden Club in Ridgefield (28 adult attendees) (February 8); gave a talk on “Houseplants” at the Cragin Library in Colchester (28 adult attendees) (February 15); and participated in and helped host the 2nd Annual Meeting of the Northeast Plant Diagnostic Network at the Station (26 adult attendees) (February 22-24).

DR. YONGHAO LI attended the UCONN-CAES Spring Bedding Plant Workshop held in Tolland (February 8); attended the 2nd Annual Meeting of the Northeast Plant Diagnostic Network at the Station (February 22-24); presented “Introduction to the Plant Disease Information Office” at the Northeast Plant Diagnostic Network meeting in Jones Auditorium (23 adult attendees) (February 23); and presented “Highlights from the Plant Disease Information Office” at the Northeast Plant Diagnostic Network meeting in Jones Auditorium (18 adult attendees) (February 24).

THE STATION HOSTS THE 2ND ANNUAL MEETING OF THE NORTHEAST PLANT DIAGNOSTIC NETWORK

The Experiment Station hosted the 2nd Annual Meeting of the Northeast Plant Diagnostic Network (NEPDN), 23-25 February 2011, in Jones Auditorium. DR. SHARON M. DOUGLAS organized this event, with assistance from MS. MARY INMAN and DR. YONGHAO LI. Twenty-six plant disease diagnosticians, from West Virginia to Maine, were greeted by DR. LOUIS MAGNARELLI, Director. Attendees discussed topics of interest that included surge capacities of diagnostic laboratories, significant diseases of the region, lab accreditation, and state reports on unusual or significant diseases. DR. SHARON DOUGLAS organized a tour of CAES, during which the group heard about the variety of research programs at the Station, including updates from MS. PAMELA SLETTEN, DR. YONGHAO LI, DR. FRANCIS FERRANDINO, DR. WADE ELMER, DR. VICTORIA SMITH, DR. NEIL SCHULTES, DR. DOUGLAS DINGMAN, DR. JASON WHITE and DR. PHILIP ARMSTRONG. After touring the Station, the group visited the USDA Forest Service Quarantine Facility in Ansonia. Dr. Melody Keena and Mr. Paul Moore hosted the group and attendees were able to view live Asian Longhorned Beetles, Emerald Ash Borers, and Siberian Gypsy Moths being reared at the facility. DR. SHARON DOUGLAS also arranged for a tour of Geremia Greenhouses in Wallingford, which was hosted by Joe Geremia, Paul Barnes, and Phil Banning, with assistance from DR. WADE ELMER. The group was given a comprehensive tour of the facility, including the biomass boilers, state-of-the-art flood floor system, and had the opportunity to sample a few diseased plants. The tour ended with a reception in one of the 6½ acres of greenhouse, complete with homemade cookies and pepperoni bread and beverages provided by the Joe, Paul, and Phil. (Photos by Dr. Yonghao Li).
Figure 1. NEPDN meeting in Jones Auditorium.

Figure 2. Drs. Elmer and Ferrandino discuss their research.

Figure 3. Dr. Dingman discusses his work with American foulbrood of honey bees.

Figure 4. Dr. Armstrong discusses the mosquito surveillance program and the BL3 laboratory.

Figure 5. Dr. Melody Keena, USFS Quarantine Laboratory, holds live Asian Longhorned Beetles.

Figure 6. Joe Geremia and Phil Banning discuss the biomass boilers at Geremia Greenhouse.

Figure 7. Paul Barnes and Joe Geremia discuss their flood floor greenhouses.

Figure 8. Reception at Geremia Greenhouses.
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VALLEY LABORATORY

DR. CAROLE CHEAH gave an update on Connecticut’s biological control program for mile-a-minute invasive weed and development of artificial diet at the 2011 Mile-A-minute Biological Control Cooperators’ meeting at the University of Delaware (72 people) (February 24); and visited and discussed mile-a-minute and hemlock woolly adelgid projects with cooperators from the Phillip Alampii Beneficial Laboratory, New Jersey Department of Agriculture (February 25).

DR. RICHARD COWLES presented "Systemic insecticide use in conifers" and "Systemic insecticide use in hardwood trees" to the Connecticut Tree Protection Association Hartford 28 (65 attendees each) (February 17); presented "The macrophotography of Jillian Cowles to the Connecticut Entomological Society" in Storrs, CT (20 participants) (February 18); and awarded, along with DR. DEWEI LI and five collaborators in four other states, a Northeast Regional IPM Grant on "Scale Management in Christmas Trees."

DR. JAMES LAMONDIA spoke about controlling nematodes with cover crops as a part of the University of Rhode Island SARE ‘Making Cover Crops Work for You’ meeting held in Sturbridge MA (27 people) (February 17); organized the CAES Tobacco Research meeting and spoke about research on management of tobacco pathogens including poty viruses, target spot and progress of the breeding program for multiple pathogen resistance in Suffield, CT (135 people) (February 23).

DR. TODD L. MERVOSH spoke about herbicide issues at the Tobacco Research Meeting in Suffield, CT (135 attendees) (February 23); and answered questions at the Connecticut Invasive Plant Working Group exhibit at the Connecticut Flower & Garden Show in Hartford (~ 50 visitors) (February 27).

TOBACCO RESEARCH MEETING HELD AT SUFFIELD VO-AG CENTER

Over one hundred and thirty five people attended the Connecticut Agricultural Experiment Station’s annual Tobacco Research Meeting held at the Suffield High School auditorium on February 23, 2011. DR. LOUIS A. MAGNARELLI and DR. JAMES LAMONDIA welcomed growers and DR. MAGNARELLI spoke about recent developments at the Station. The meeting addressed a wide variety of issues of concern to growers. DR. JAMES LAMONDIA spoke about research on management of tobacco pathogens including poty viruses, target spot and progress of the breeding program for multiple pathogen resistance. DR. TODD MERVOSH spoke about herbicides, weed control and cover crop issues. Sherry Wyckoff of The New York Center for Agricultural Medicine and Health updated growers about the ongoing farm worker health and safety project in Connecticut. DR. SANDY ANAGNOSTAKIS explained the history and current status of her Chestnut breeding program, Mr. Thomas Rathier spoke about the effect of degree days and weather on shade and broadleaf tobacco, and tobacco cultural considerations. Mr. Clif Parker spoke about updates and changes in the Risk Management program and insurance programs and Director Gary Keough of the New England Agricultural Statistics Service provided updates on the CT Valley tobacco crop statistics. Ross Eddy of the Farm Services Administration provided updates on FSA services to growers. Mr. Bill Leahey updated growers about issues with using municipal water for irrigation and John Arnold spoke about the objectives of the National Council of Agricultural Employers. MS. TESS FOLEY updated growers about the purpose and achievements of the Connecticut Agricultural Experiment station Research Foundation. MS. MICHELLE SALVAS, MS. JANE CANEPA-MORRISON, MR. JAMES PrestE and MS. DIANE RIDDLE assisted with much of the behind the scenes work for the meeting. The meeting qualified for pesticide applicator re-certification credit in both Connecticut and Massachusetts and 70 persons received credit.
Tobacco barn collapses on February 10, 2011 at Valley Laboratory, Windsor

Images taken by: Dr. Victoria Smith


LaMondia, James A. Strawberry root problems. New York Berry News Vol. 10(2)


Rathier, Thomas. Developing practical strategies for prediction, identification, and remediation of metal contamination in urban soils. Connecticut Conference on Natural Resources Proceedings

Did you know that mosquitoes can transmit nine different encephalitis viruses?