



# STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION



# CAES

**The Connecticut Agricultural Experiment Station**

*Putting Science to Work for Society since 1875*

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.



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## DEPARTMENTAL NEWS

### ADMINISTRATION

**DR. THEODORE ANDREADIS** attended an Invasive Plant Council Meeting held at the Department of Agriculture in Hartford (September 9).

### ANALYTICAL CHEMISTRY

**DR. JASON C. WHITE** along with along with **DR. CHRISTINA ROBB**, **DR. ARNAB MUKHERJEE**, and **DR. WALTER KROL** participated in an FDA FERN Chemotherapeutics Working Group teleconference call (September 3), along with **MS. KITTY PRAPAYOTIN-RIVEROS**, **MS. TERRI ARSENAULT**, **DR. BRIAN EITZER**, **MR. CRAIG MUSANTE**, **MR. MICHAEL CAVADINI**, **DR. CHRISTINA ROBB**, **MR. JOSEPH HAWTHORNE**, **MR. JOHN RANCIATO**, **DR. ALIA SERVIN**, **DR. ROBERTO DE LA TORRE ROCHE**, **DR. ARNAB MUKHERJEE**, and **DR. WALTER KROL** participated in a year 2 “wrap-up” teleconference call with FDA as part of our ISO Accreditation Program (September 4), attended the monthly Laboratory Preparedness Advisory Group Meeting at the CT Department of Public Health Laboratory in Rocky Hill CT (September 8), along with **DR. BRIAN EITZER**, **DR. CHRISTINA ROBB**, **MS. TERRI ARSENAULT**, and **MR. JOSEPH HAWTHORNE** attended the annual FDA FERN cCAP Technical meeting in Boca Raton, FL and gave a presentation entitled “Pyrethroids, Lobsters, and Long Island Sound- Oh my” (60 attendees) (September 12), participated in a USDA NIFA Grant Review Panel for program A4172 “Identifying and Targeting Critical Food Safety Needs” (September 19), along with **MS. KITTY PRAPAYOTIN-RIVEROS**, **MS. TERRI ARSENAULT**, and **MR. MICHAEL CAVADINI** participated in a bimonthly mentor/mentee teleconference call with the Ohio Department of Agriculture (September 25), attended the 11<sup>th</sup> International Phytotechnologies Conference in Heraklion Crete (Greece) as Society President and gave opening and closing plenary talks, as well as a mini-plenary entitled “Plant Nanoparticle Interactions” (300 attendees) (September 29-October 3), and chaired the “Plant Nanoparticle Interactions” session, and chaired the annual Business Meeting of the International Phytotechnology Society (IPS) at the annual meeting in Heraklion Crete (Greece) (September 30).

**DR. BRIAN EITZER** attended and presented a poster on the analysis of aflatoxins in milk at the AOAC International Meeting in Boca Raton FL September 7-10 (900 attendees) (September 7-10) and presented a talk on the T022 method validation project at the FDA FERN cCAP Technical meeting in Boca Raton, FL (60 attendees) (September 11-12).

**DR. CHRISTINA ROBB** attended the September board meeting for the Eastern Analytical Symposium (EAS) by phone (September 19).

**DR. ALIA SERVIN** attended the 11<sup>th</sup> International Phytotechnologies Conference in Heraklion Crete (Greece) and presented a lecture entitled “Nanoscale interactions between engineered nanomaterials and black carbon (biochar) in soil” (30 attendees) (September 30-October 3).

**DR. ROBERTO DE LA TORRE ROCHE** attended the 11<sup>th</sup> International Phytotechnologies Conference in Heraklion Crete (Greece) and presented two lectures entitled “Co-exposure to engineered nanoparticles alters the toxicity and accumulation of persistent pesticides in agricultural crops” (30 attendees) and “Trophic transfer potential of rare earth element oxide nanoparticles through terrestrial food chains”(30 attendees) (September 30-October 3).



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### ENTOMOLOGY

**DR. KIRBY C. STAFFORD III** was interviewed about ticks by John Mahon, WINY, Putnam (September 4); participated in the conference call of the Tick IPM Working Group (September 10); with **DR. KIMBERLY STONER**, participated in a meeting with Steve Young, the new director of the Northeastern IPM Center, at UConn in Storrs (September 15); was interviewed about ticks and Lyme disease by Adrian Stroud, WJMJ Radio, Hartford (September 17); with **DR. KIMBERLY STONER, MR. MARK CREIGHTON**, and **DR. DOUGLAS DINGMAN**, met with Jerry Hayes, Monsanto's Beelogsics Commercial Lead, at their research center in Mystic (September 24).

**MR. MARK H. CREIGHTON** set up a honeybee information booth with an observation hive and spoke to visitors about the value of bees as pollinators at Winchester Center Day (50+ attendees visited the booth) (September 13); set up a honeybee information booth with an observation hive and spoke to visitors about honeybees, pollination, and bee health at the Big E in West Springfield, MA (1,218 attendees visited the booth) (September 17); and presented a workshop on preparing bee hives for the winter at Massaro Community Farm in Woodbridge (30 attendees) (September 20).

**MS. KATHERINE D. DUGAS** with **MS. NICOLE GABELMAN**, staffed an ALB/EAB booth at the Hebron Harvest Fair (300 attendees visited the booth) (September 4-7); with **MS. NICOLE GABELMAN**, staffed an ALB/EAB booth at the Somers Four Town Fair (600 attendees visited the table) (September 11-14); with **MR. STEVE SANDREY**, attended the Celebrating Agriculture festival in Woodstock (September 20); with **MR. MARK CREIGHTON** and **MS. NICOLE GABELMAN**, staffed an ALB/EAB/honeybee booth in the Connecticut Building at the Big E in West Springfield, MA (September 23); with **MS. NICOLE GABELMAN**, staffed an ALB/EAB booth at the Durham Fair (September 25-28); attended the Horticultural Inspection Society Systems Approach to Nursery Certification workshop, held at Monrovia Nursery in Granby and at the Valley Laboratory in Windsor (September 29-30).

**DR. CHRIS T. MAIER** displayed the sugar maple borer, a longhorned beetle not seen in about 50 years, and a fact sheet about it at a meeting of the Connecticut Entomological Society at UConn in Storrs (September 19).

**DR. GALE E. RIDGE** was interviewed about the unusually high populations of yellowjackets experienced in Connecticut this year by the Record Review. It was due to a very dry early spring period when high numbers of overwintering queens established nests successfully (September 23); was interviewed about the science of Entomology by Trekaroo, a children's magazine (September 23); and presented a talk about bed bugs and their history with capitalism to the Connecticut Community Providers Association in Rocky Hill (30 attendees) (September 30).

**DR. CLAIRE E. RUTLEDGE** presented a talk titled "Emerald ash borer in Connecticut, current range, severity and biological control" to the 3<sup>rd</sup> Annual Connecticut Tree Protective Association EAB Tour in Southbury (80 adults) (September 18) and presented a talk titled "The Connecticut Wasp Watchers Experience: Using a native wasp and citizen scientists to detect the emerald ash borer" in the Urban Forest Entomology seminar at the Joint Annual Meeting of the Entomological Societies of Canada and Saskatchewan held in Saskatoon, SK, Canada (34 adults) (September 29).

**DR. VICTORIA L. SMITH** participated in a meeting of the Yale Biosafety Committee in New Haven (20 participants) (September 18) and participated in the Horticultural Inspection Society Systems Approach to Nursery Certification workshop, held at Monrovia Nursery in Granby and at the Valley Lab in Windsor (25 participants) (September 29-30).

**DR. KIMBERLY A. STONER** presented a talk on ground-nesting bees and wasps to parents of elementary school students, along with **DR. GALE RIDGE**, in response to concerns from parents that ground-nesting bees would harm the school children at the William Strong School in Southington (~200 attendees) (September 3); participated in a meeting of the City Farm & Garden Working Group (new name for the Urban Agriculture Working Group) at City Hall in New Haven (September 5); presented a talk titled "Growing plants that are good for bees" at a symposium.



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sium organized by the Connecticut Greenhouse Growers Association and UConn Cooperative Extension and held at Naugatuck Valley Community College in Waterbury (28 attendees) (September 10); and met with Stephen Young, the incoming director of the Northeast Regional Integrated Pest Management Center, at UConn in Storrs (September 15); was interviewed about honey bee health and proposals to ban neonicotinoid insecticides by Patrick Skahill, Connecticut Public Radio (September 30).

## ENVIRONMENTAL SCIENCES

**DR. JOSEPH PIGNATELLO**, with visiting scientists, Dr. Jinzhi Ni and Ms. Yanyan Zhang, met with Prof. Baoshan Xing, University of Massachusetts, Amherst to discuss collaborative research (September 8).

**MR. GREGORY BUGBEE** spoke on "Fall Lawn Care" to the Morris Cove Garden Club in East Haven (approx. 25 attendees) (September 16) and served on a panel that included DEEP Commissioner Klee, State Senator Bartolomeo, State Representative Altobello and First Selectman Brayshaw, at the Middlefield Community Center, to discuss the condition of Lake Beseck after drawdown and dam repairs (approx. 75 attendees) (September 22).

**DR. GOUDARZ MOLAEI** gave a talk entitled, "*Tracking Ticks and Tick-borne Diseases in Connecticut*", and represented the CAES on a panel to discuss new scientific approaches to Lyme disease testing and diagnosis at a symposium on the laboratory testing for spirochetemia in *Borrelia burgdorferi* and *Borrelia miyamotoi* Infections at the Connecticut State Capitol Building (September 16).

**MR. JOHN SHEPARD** attended a meeting of the Board of Directors of the Northeastern Mosquito Control Association in Northboro, Massachusetts (11 attendees) (September 26).

**MR. MICHAEL C. THOMAS** demonstrated insect collecting and preservation techniques to the University of Connecticut Entomology and Yale University Terrestrial Arthropods class at the Yale Forestry Camp in Norfolk (35 students) (September 5-6).

## FORESTRY AND HORTICULTURE

**DR. JEFFREY WARD** interviewed about running bamboo growth and control by John Dankosky on WNPR Where We Live program (September 5); interviewed about fall colors by Pam McLoughlin of the New Haven Register (September 5); interviewed about fall colors by Dana Whalen of WTIC AM-1080 (September 8); interviewed about fall colors by Amanda Beau-lier of NBC-30 (September 8); administered practical and oral examination to arborist candidates for the Connecticut Tree Protection Examining Board (September 10); spoke of habitat management for birds at Project Covert workshop in Norfolk (34 attendees) (September 13); interviewed about declining spruce by Skyler Magnoli of the Danbury News-Times (September 16); participated in the CT Statewide Vegetation Management Task Force in Middlefield (September 23); interviewed about fall colors by Penelope Overton of the Waterbury Republican-American (September 25); attended an executive committee meeting of the Connecticut Urban Forest Council, Middlefield (September 26); and gave an invited talk "The link between deer, invasive plants and Lyme disease" to the Conservation Commissions of Dummerston, Putney, Guilford, Marlboro, and Brattleboro, VT (80 attendees) (September 30).

**DR. ABIGAIL MAYNARD** with **DR. DAVID HILL**, judged fruits and vegetables at the North Haven Fair (September 4); visited the Hamden Farmers' Market and talked about the New Crops Program with 5 growers (September 12).

**DR. SCOTT WILLIAMS** with **MS. MEGAN FLOYD**, conducted a small mammal trapping demonstration and deer exclosure explanation to students in the Wildlife Management Tech-



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niques class in the Department of Natural Resources and the Environment at the University of Connecticut (20 students) (September 8); interviewed by Tony Spinella of the Redding Pilot about the deer management aspect of the Centers for Disease Control-funded Integrated Tick Management Study (September 15).

**MR. JOSEPH P. BARSKY** served as a judge for the FFA Regional Agriscience Fair at the Eastern States Exposition, Springfield, MA (September 12); with **MS. AMANDA MASSA**, staffed the CAES Booth at the Brooksville Fall Festival in Hamden (1500 attendees) (September 27).





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**DR. ADRIANA ARANGO VELEZ**, received her B.S. (plant pathology) and M.S. from the Universidad Nacional de Colombia. After working on resistance mechanism to coffee rust at the Colombian National Coffee Research Centre and edaphic adaptation to aluminum toxicity in pastures at the International Center for Tropical Agriculture, she earned her Ph.D. from the University of Alberta. Her doctoral research examined the physiological basis for drought resistance in poplar clones. Before coming to Connecticut, Adriana was a Postdoctoral Fellow in the TRIA Project (mountain pine beetle) at the University of Alberta where she examined different response mechanisms of pines across multiple levels of plant defense, linking patterns with molecular and physiological processes to develop a comprehensive understanding of plant-pathogen interactions under drought stress.

At the Connecticut Agricultural Experiment Station, her research will focus on plant adaptation and responses to biotic and abiotic stresses. For instance, insects and pathogens (e.g., emerald ash borer, *Nectria* canker) impose selective pressures on plants which respond by developing morphological, biochemical and molecular defense mechanisms. These defenses can be exploited as important tools for pest management to maximize plant survival, and potentially minimize pest chemical control. In addition, urban trees suffer from abiotic stressors, such as restricted root zone, limited availability of mineral nutrients, air and soil pollution, and mechanical damage, influencing growth and development of trees in urban landscapes. Investigating naturally occurring and artificially applied mycorrhizae as a method for abiotic stress resistance can be used for street tree management program and tree planting plan.



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## PLANT PATHOLOGY AND ECOLOGY

**DR. SANDRA L. ANAGNOSTAKIS** attended the Federal Regional Chestnut project meeting in La Crosse, WI and reported on CAES chestnut research (September 4-7).

**DR. DONALD E. AYLOR** gave an invited talk titled "Emission Rates of Bioaerosols from Sources Embedded in the Atmosphere's Roughness Sublayer" at an NSF-sponsored Workshop on "Fluid Dynamics of Living Systems" in Arlington, VA (50 adult attendees) (September 15).

**DR. SHARON M. DOUGLAS** participated in the Board of Directors meeting of the CTPA at the Station (14 attendees) (September 9); assisted the CT Tree Protective Examining Board with administering the oral exam to candidates for the CT arborist license (September 10); was interviewed about state and region-wide problems with spruce trees by Skyler Magnoli of the Danbury News Times (September 16); was interviewed about the 2014 fall foliage season by Sam Kantrow of News 8 (September 23); and gave a presentation titled "Boxwood blight: A new threat to boxwood in North America" for the Horticultural Inspection Society, Eastern Chapter SANC exercise at the Valley Lab in Windsor (25 attendees) (September 30).

**DR. WADE H. ELMER** was visited by Lorraine Graney of Bartlett Tree Company and discussed Fusarium root rot problems in woody ornamentals (September 19) and was visited by Andrew Bramante of Greenwich High School to discuss mentoring a high school student for his/her senior science project (September 29). Dr. Elmer's paper titled "A Tripartite Interaction Between *Spartina alterniflora*, *Fusarium palustre*, and the Purple Marsh Crab (*Sesarma reticulatum*) Contributes to Sudden Vegetation Dieback of Salt Marshes in New England," which was published in the October 2014 issue of *Phytopathology* (Volume 104, pages 1070-1077), was awarded the Editor's Pick of the Month. Annie Merrill, a senior at Greenwich High School mentored by Dr. Elmer for her senior class science project titled "The role of earthworms and biochar on plant health," was a top finalist at the Intel Science Talent Search in Washington, DC, where she met President Obama and Bill Nye the Science Guy.



Annie Merrill meeting President Obama.



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Annie Merrill (on the right) talking with Bill Nye the Science Guy.

**DR. FRANCIS J. FERRANDINO** visited Jerry Savino at Savino Vineyards in Woodbridge to discuss downy mildew damage on the Vinifera winegrapes (September 9).

**DR. YONGHAO LI** was interviewed about the fall foliage season in Connecticut by Pam McLoughlin for the New Haven Register (September 4); spoke on "Disease Management in Christmas Tree Farms" at the CCTGA Fall Field Day in Warren (40 attendees) (September 20); and was interviewed about how stress shows up in foliage by Penelope Overton for the Waterbury Republican-American (September 24).

**DR. ROBERT E. MARRA** gave a presentation on molecular diagnostics and detection of the boxwood blight pathogen for the Horticultural Inspection Society, Eastern Chapter SANC exercise at the Valley Laboratory in Windsor (25 attendees) (September 30).

## VALLEY LABORATORY

**DR. CAROLE CHEAH** was interviewed (September 10) by Anne Ravers for an article on battling mile-a-minute weed in the New York Times published September 24, 2014.

**DR. RICHARD COWLES** presented "The Course at Yale as a case study in insecticide resistance," to the Connecticut Environmental Council (20 participants) (September 8); spoke about "Unconventional chemistries for targeting spotted wing drosophila," at the National IR-4 meeting, Atlanta, GA (150 attendees) (September 10); presented "Can mass trapping SWD be made to work?" at a research and extension SWD workshop, Highland, NY (30 participants) (September 16); talked at a workshop for the Connecticut Tree Protective Association on "Best management practices for protecting ash trees with insecticides from EAB," Southbury (100 attendees) (September 18); presented "Turf insect management" to the UConn athletic turf maintenance class, Storrs (10 attendees) (September 18); and discussed "Mite, scale, and root rot management" at the CT Christmas Tree Growers' Association fall meeting, Warren, CT (40 attendees) (September 20).

**DR. JAMES LAMONDIA** examined candidates for the Connecticut arborist license and participated in the quarterly meeting of the Connecticut Tree Protection Examining Board in New Haven (September 10); submitted posters on 'Management of boxwood blight caused by *Calonectria pseudonaviculata*' and '*Calonectria pseudonaviculata* can cause leaf spot and stem blight of *Pachysandra terminalis* and *P. procumbens*' to the International Plant Propagators Society Eastern Region meeting in Niagara Falls, Ontario Canada (September 17-20); participated in a steering committee meeting to develop an agenda for the Connecticut Vegetable and Small Fruit Growers Conference in Vernon CT (September 22); taught a class on identification, biology and management of tree diseases to students in the Connecticut Tree Protective Association's Arbori-





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culture 101 class in Wallingford (40 attendees) (September 24); and spoke about boxwood blight fungicide management to plant inspectors at the SANC (Systems Approach to Nursery Certification) meeting held in Windsor (28 attendees) (September 30).

## DEPARTMENTAL RESEARCH UPDATES SEPTEMBER 2014

**Elmer, W. H.** 2014. Diseases of asparagus. In: *Diseases of Temperate Vegetable Plants*, Chapter 8. CABI, Ray George (ed.), pp. 137-151.

The chapter summarizes eleven major economically limiting diseases of asparagus in the world today. Each disease is described for life cycle, ecology, symptoms, and management.

**Elmer, W. H., and L. E. Datnoff.** 2014. Mineral Nutrition and Suppression of Plant Disease. In: Neal Van Alfen (Editor-in-Chief), *Encyclopedia of Agriculture and Food Systems*, Vol. 4, San Diego: Elsevier, 2014, pp. 231-244.

Mineral nutrition is the first line of host defense against plant pathogens. This chapter captures the most current understanding of how each element affects plant disease in terms of host physiology and explores possible methods for prescribing specific nutritional regimes into agricultural practice to maximize suppression against important diseases.

**Elmer, W. H., and J. A. LaMondia.** 2014. Comparison of saline tolerance among genetically similar species of *Fusarium* and *Meloidogyne* recovered from marine and terrestrial habitats. *Journal of Estuarine, Coastal and Shelf Science* (DOI: 10.1016/j.ecss.2014.09.013).

**ABSTRACT:** Successful plant pathogens co-evolve and adapt to the environmental constraints placed on host plants. We compared the salt tolerance of two salt marsh pathogens, *Fusarium palustre* and *Meloidogyne spartinae*, to genetically related terrestrial species, *F. sporotrichioides* and *M. hapla*, to assess whether the salt marsh species had acquired selective traits for persisting in saline environments or if salt tolerance was comparable among *Fusarium* and *Meloidogyne* species. Comparisons of both species were made in vitro in vessels containing increasing concentration of NaCl. We observed that *F. palustre* was more tolerant to NaCl than *F. sporotrichioides*. The radial expansion of *F. palustre* on NaCl-amended agar plates was unaffected by increasing concentrations up to 0.3 M. *F. sporotrichioides* showed large reductions in growth at the same concentrations. Survival of *M. hapla* was greatest at 0 M, and reduced by half in a 0.3 M solution for 4 days. No juveniles survived exposure to 0.3 M NaCl for 12 days. *M. spartinae* survived at all NaCl concentrations tested, including 1.0 M for at least 12 days. These findings are consistent with the hypothesis that marine organisms in the upper tidal zone must osmoregulate to withstand a wide range of salinity and provide evidence that these pathogens evolved in saline conditions and are not recent introductions from terrestrial niches.

**Elmer, W. H.** 2014. A tripartite interaction between *Spartina alterniflora*, *Fusarium palustre*, and the purple marsh crab (*Sesarma reticulatum*) contributes to Sudden Vegetation Die back of salt marshes in New England. *Phytopathology* 104:1070-1077.

**ABSTRACT:** Tripartite interactions are very common and occur when one agent (an arthropod or pathogen) changes the host plant in a manner that alters the attack of the challenging agent. We examined herbivory from the purple marsh crab (*Sesarma reticulatum*) on *Spartina alterniflora* following exposure to drought and/or inoculation with *Fusarium palustre* in mesocosms in the greenhouse and in crab-infested creek banks along intertidal salt marshes. Initially, pairwise treatments (drought stress on *S. alterniflora* and disease from *F. palustre*) were examined in the greenhouse. Then a second challenger, the purple marsh crab, was introduced to determine how drought and disease from *F. palustre* affected the attraction and consumption of *S. alterniflora*. As irrigation was withheld from the normal irrigation treatment to create a mild drought, and then a severe drought, there was a corresponding reduction in plant height, fresh weight, root weight, and dry weights. When these treatments were combined with inoculation with *F. palustre*, plants were significantly more stunted and symptomatic, had less fresh weight, more diseased roots, and a greater number of *Fusarium* colonies growing from the roots ( $P < 0.001$ ) than non-inoculated plants. The effects were additive and statistical interactions were not detected. Estimates of herbivory (number of grass blades cut or biomass consumption) by the purple marsh crab was significantly greater on drought-stressed, diseased plants than on healthy plants. Drought increased at-



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traction to the purple marsh crab more than inoculation with *F. palustre*. However, in mild drought conditions, plant consumption was greater on inoculated plants. Healthy, non-stressed transplants set into plots in crab-infested intertidal creek banks were grazed less each year than inoculated plants and/or plants that were exposed to drought. Several hypotheses relating to nutrition, chemotaxis, and visual attraction are presented to explain how stress from drought or disease might favor herbivory.

## GRANTS RECEIVED SEPTEMBER 2014

**Sandra L. Anagnostakis** was awarded a \$5,000 grant from the Northern Nut Growers Association to continue work on nutrient content of chestnuts.

**Dr. James LaMondia** received \$6,000 to conduct research on boxwood blight management from Syngenta Crop Protection.

## JOURNAL ARTICLES APPROVED SEPTEMBER 2014

**Elmer, Wade H.** Effect of Biochar and Earthworms on Root Health, Mycorrhizae, and Yield of Asparagus. Plant and Soil

**Elmer, Wade H.** Management of Fusarium Crown and Root Rot of Asparagus. Crop Protection

Garvin, N., W. J. Doucette, **Jason White**. Investigating Differences in the Root to Shoot Transfer and Xylem Sap Solubility of Organic Compounds Between Zucchini, Squash, and Soybean Using a Pressure Chamber Method. Chemosphere

Gullino, M. Lodovica, M. L. Daughtrey, A. Garibaldi, and **W. H. Elmer**. Fusarium Wilts of Ornamental Crops and their Management. Crop Protection

**LaMondia, James A.** Fusarium Wilt of Tobacco. Crop Protection

Yang, Y., **Joseph J. Pignatello**, J. Ma, W. A. Mitch. Evaluation of Advanced Oxidation Processes (AOPs) for Degradation of Pharmaceuticals in Reverse Osmosis Brines from Municipal Wastewater Reuse Facilities. Environmental Science & Technology

Yang, B., **Joseph J. Pignatello**, D. Qu, B. Xing. Re-oxidation of Photo-reduced Polyoxotungstate by Different Oxidants in the Presence of a Model Pollutant – Kinetics and Reaction Mechanism. Journal of Physical Chemistry

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Entrance to The Connecticut  
Agricultural Experiment  
Station in New Haven on  
Huntington Street



Main Laboratories, New Haven



Lockwood Farm, Hamden



Griswold Research Center, Griswold



Valley Laboratory, Windsor

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Station News was prepared and edited by Dr. Theodore G. Andreadis, Dr. Jason C. White, Ms. Tia Blevins, Mrs. Lisa Kaczynski Corsaro, Mrs. Roberta Ottenbreit, and Mrs. Vickie Bomba-Lewandoski.