# The Nation's First State Agricultural Experiment Station

**The Connecticut Agricultural Experiment Station is a state-supported scientific research institution dedicated to improving the food, health, environment, and well-being of Connecticut's residents since 1875.**


Griswold Research Center, Griswold


Lockwood Farm, Hamden


Valley Laboratory, Windsor


Main Laboratories, New Haven

# Visit the CAES in 2019

## Join us at our 2019 events

**Associates Annual Meeting**—
Wednesday, April 17, 7 p.m.,
Jones Auditorium, New Haven, CT

**Plant Science Day**—
Wednesday, August 7, 10 a.m.,
Lockwood Farm, Hamden, CT

## Visit outdoor exhibit gardens

**Nursery growers' gardens** (plants discovered by Connecticut growers) in:

- New Haven
- Windsor
- Lockwood Farm in Hamden

**Nursery growers' Plant Identification Garden** at the:

- Valley Laboratory in Windsor

**Bird and Butterfly Garden** at:

- Lockwood Farm in Hamden

## Research Farm

The Experiment Station's 75-acre research farm in Hamden, called Lockwood Farm, is open to the public during normal business hours. Parking is available inside the gate. Free admission.

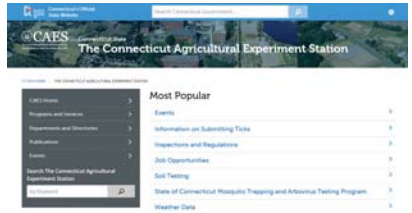
### Experiment Station Associates

P.O. Box 6093, Wallingford, CT 06492

The ESA is a proactive, volunteer group of Station supporters who assist in promoting the research work carried out at the CAES. All interested persons are welcome to join. Benefits include participation in field trips to Connecticut's leading agricultural businesses and publications highlighting the latest research developments at the Station. For more information, visit the Station web site and click on the Experiment Station Associates.

Printing of this leaflet was funded by the Experiment Station Associates.

# Learn More About the CAES




## https://portal.ct.gov/caes

The Experiment Station's web page features an extensive electronic Plant Pest Handbook, arranged by plant name, which covers diseases, insects, and cultural and nematode problems of plants grown in Connecticut.

### Hours

Residents may call or visit the Experiment Station during normal business hours, 8:30 a.m.-4:30 p.m., Monday through Friday, except state holidays.

### Telephone Numbers

New Haven area:
Plants: (203) 974-8601
Insects: (203) 974-8600
Soils: (203) 974-8521
Other Inquiries: (203) 974-8500

Hartford area:
All inquiries: (860) 683-4977

Statewide:
Toll-free: (877) 855-2237

### Locations

Main Laboratories (203) 974-8500
123 Huntington St., New Haven, CT 06511-2016

Valley Laboratory (860) 683-4977
153 Cook Hill Road, Windsor, CT 06095-0248

Lockwood Farm (203) 974-8618
890 Evergreen Avenue, Hamden, CT 06518-2361

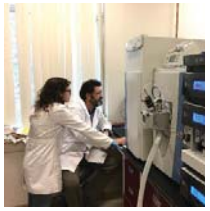
Griswold Research Center (860) 376-0365
190 Sheldon Road, Griswold, CT 06351-3627


CAES
The Connecticut Agricultural Experiment Station
*Putting Science to Work for Society since 1875*

## Protecting Agriculture, Public Health, and the Environment

# Agriculture

Bees and other pollinators are essential for reproduction of native plants and production of many fruits and vegetables. CAES scientists are evaluating exposure of bees to pesticides in nectar and plant pollen and are working with State growers to identify and reduce risks to pollinators associated with current agricultural practices.



CAES scientists test hundreds of human food samples each year for pesticides, heavy metals and foreign material, and have recently begun to test animal pet food for a range of contaminants, including highly toxic mycotoxins in an FDA accredited program.

CAES scientists have pioneered the use of nanoscale nutrients to suppress crop disease in agriculture and increase food production without increasing pesticide use and are further investigating safety and potential toxicity concerns of nanotechnology to the food supply.

**Did You Know?**

There are 1,689 beekeepers with 8,220 hives registered with the Office of the State Entomologist. Connecticut has 349 species of bees, and honey bees are just one species.

# Health

CAES scientists have found that the southern lone star tick, *Amblyomma americanum*, has now become established in parts of southwestern CT. The tick is an aggressive human biter and is associated with a number of human pathogens and diseases including Human monocytotropic ehrlichiosis, Bourbon and Heartland viruses, southern tick-associated rash illness, spotted fever group *Rickettsia*, and red meat allergy.

CAES scientists monitor mosquito-borne viruses that cause human and animal illness including eastern equine encephalitis and West Nile virus every year from June through October. Over 190,000 mosquitoes from around the state are tested annually. They are also investigating the efficacy of new monitoring and control tools to rapidly detect and respond to disease outbreaks as a part of the *Northeast Regional Center for Excellence in Vector-Borne Diseases*.

CAES scientists have discovered that controlling invasive species such as Japanese barberry can greatly reduce the risk of human exposure to Lyme disease by reducing the number of blacklegged ticks, and that spring wildflowers and forest regeneration become abundant when invasive control is combined with maintaining low deer populations.

**Did You Know?**

CAES scientists have isolated 6 different viruses from Connecticut mosquitoes that cause human disease: Cache Valley, Eastern Equine Encephalitis, Jamestown Canyon, LaCrosse, Trivittatus, and West Nile.

# Environment

CAES scientists in the Station's *Invasive Aquatic Plant Program* are quantifying the locations of invasive aquatic plants in Connecticut's lakes and ponds, determining their effects on native plant communities, tracking their spread and providing information that is critical for management strategies. Since 2004, scientists have completed aquatic vegetation surveys of 230 lakes and ponds.

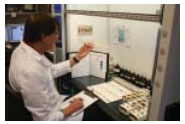
CAES scientists are monitoring the impact of climate change on infestations of hemlock woolly adelgid, *Tsuga canadensis*, in the Northeast and releasing predatory beetles to control this destructive invasive insect pest of eastern hemlock trees.

CAES scientists are conducting microbiological studies to uncover the causes and consequences of sudden vegetation dieback, a phenomenon in which the dominant vegetation is typically killed off within a single season, on Connecticut coastal ecosystems. This research will help provide restoration strategies and management practices to protect these valuable resources.

**Did You Know?**

CAES scientists have been developing innovative forest management strategies since 1901 that provide both ecosystem services and sustainable harvest of forest products.

# Public Service



Testing soil samples for fertility and recommending methods for growing better plants are a continuing no-cost service for citizens of Connecticut. Testing is available at our laboratories in New Haven and Windsor and provides direct economic and environmental benefits by reducing unnecessary fertilizer treatments to lawns and plants thereby reducing nitrogen runoff into soil and water.

The "CAES Tick Testing Program" provides testing at no cost to Connecticut residents. Ticks are tested for three different pathogens, the causative agents of Lyme disease, babesiosis and anaplasmosis.

Station Inspectors work to safeguard agriculture and forests in CT by inspecting and certifying agricultural products leaving and entering the state and by conducting annual surveys to detect exotic pests that threaten the health and productivity of Connecticut's forests.

Station staff are available in our New Haven and Windsor facilities to answer public inquiries and diagnose insect and plant disease problems for homeowners, businesses, and pest control professionals.

Staff also provide outreach programs throughout the state through workshops, exhibits, lectures, and seminars.

**Did You Know?**

Of the nearly 4,400 ticks submitted by residents to the CAES Tick Testing Laboratory in 2018, more than 48% were infected with *Borrelia burgdorferi* (Lyme disease), *Babesia microti* (Babesiosis), or *Anaplasma phagocytophilum* (Anaplasmosis).