

A wide-angle photograph of a large, circular agricultural field with a reddish-brown surface. In the foreground, a person wearing a dark shirt and a cap is walking, holding a long pole. The field is surrounded by a body of water, and the background shows a line of trees under a sky filled with white and grey clouds.

# Center for Agriculture, Food, and the Environment (CAFE)



The Center *for*  
**Agriculture,**  
**Food** and the  
**Environment**

Mass Agricultural  
Experiment  
Station

Mass. Water  
Resources  
Research Center

UMass Extension

UMass Cranberry  
Station

Facilities and  
Services

Mass Agricultural  
Experiment  
Station

Mass. Water  
Resources  
Research Center

UMass Cranberry  
Station

Facilities

Extension Faculty in  
Departments



Agriculture Program



4-H Youth Development  
Program



UMass Extension



Nutrition  
Education Program



Clean Energy  
Extension

## Extension Faculty in Departments



Extension Faculty are responsible for conducting, disseminating, and applying research in practical ways to address some of our Commonwealth's most pressing needs. Ideally, should bridge the divide between fundamental research and extension.

16 NTT Extension Professors (+ 2 active searches) are housed in 5 departments and the Cranberry Station. They also hold administrative roles.

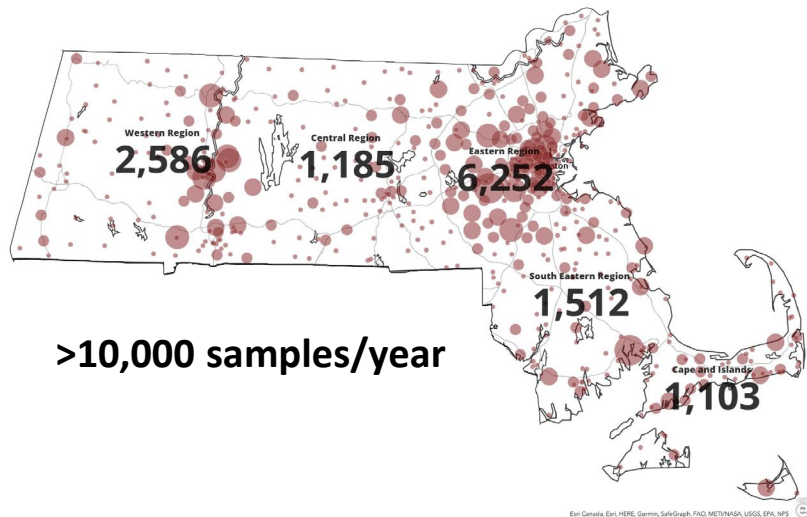
Funding support is split between CNS and CAFE (40/60 or 50/50). Extension Faculty teach at a limited level (10-20% of the time), Research (20-40%), and Extension (50%)



# Services



Soil and Nutrient Testing Lab



Plant Diagnostic Lab  
-Diagnostics and IPM recommendations



Pesticide Education Program

Crop and Animal  
Research and  
Education Farm,  
South Deerfield



Cold Spring Orchard  
Research and Education  
Center, Belchertown

Mass Agricultural  
Experiment  
Station

Mass. Water  
Resources  
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Station

Facilities

Joseph Troll Turf  
Research Farm,  
South Deerfield



Equine and Livestock  
Research and  
Education Farm,  
Hadley, MA

Mass Agricultural  
Experiment  
Station

Mass. Water  
Resources  
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Extension

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Cranberry  
Station

Facilities

## UMass Cranberry Station, East Wareham

- New Bogside Building and Renovated Lab: \$8M+ investment; Env. Bond Bill and Chancellor's Office
- Certificate of Occupancy granted October 2023
  - 11 Acres Research Farm on-site; lease 7 Acres in Myles Standish Forest
  - 1 large and 1 small plastic house, shops, garage





## **Cranberry Station Personnel**

Specialists in Plant Pathology, Entomology, Environmental Physiology, Hydrology (ARS), Plant Nutrition/Cultural Practices, and Weed Science/Integrated Pest Management



Mass. Water  
Resources  
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Station

Facilities

## Mass Agricultural Experiment Station



\$3.3M Federal Capacity Grant Funding



77 Faculty funded by projects across 4 Colleges and Schools



CAFE Summer Scholar Undergraduate Program and Graduate student summer RAs associated with projects



Contribute funds for equipment purchases for Capacity Grant Research



Administration and research support personnel

# 77 Faculty Research Projects on Capacity Funds

## School of Public Health & Health Sciences

- Nutrition

## School of Education

## College of Social and Behavioral Sciences

- Resource Economics
- Landscape Architecture  
and Regional Planning

## College of Natural Sciences

- Stockbridge School of Agriculture
- Veterinary & Animal Sciences
- Microbiology
- Biology
- Environmental Conservation
- Food Science
- Earth, Geographic, and Climate Sciences
- Center of Agriculture, Food & the  
Environment



Climate Resilience  
and Agricultural  
Sustainability  
Grant Program



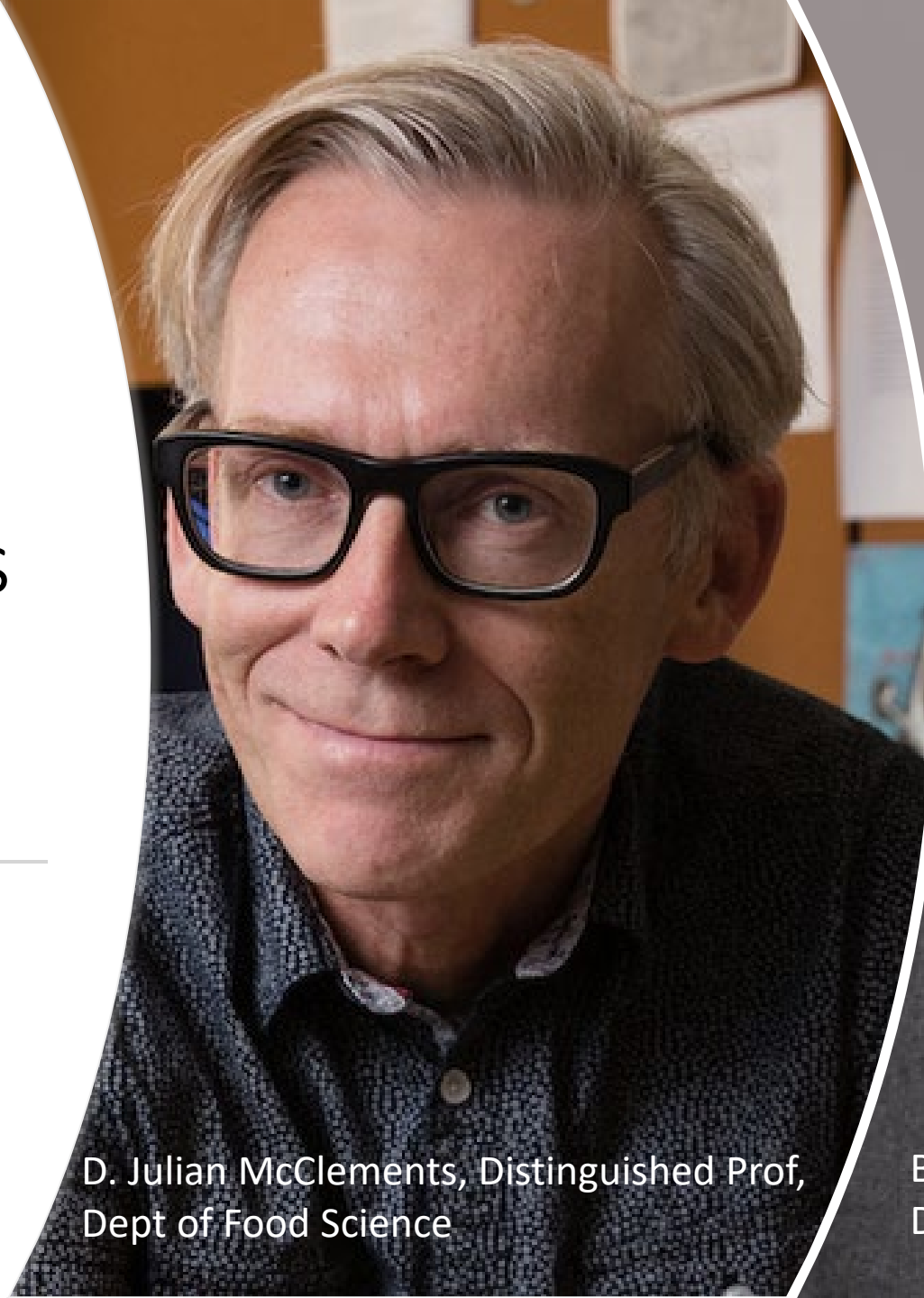


# Research Highlights



Research.com's  
2024 top  
researcher lists

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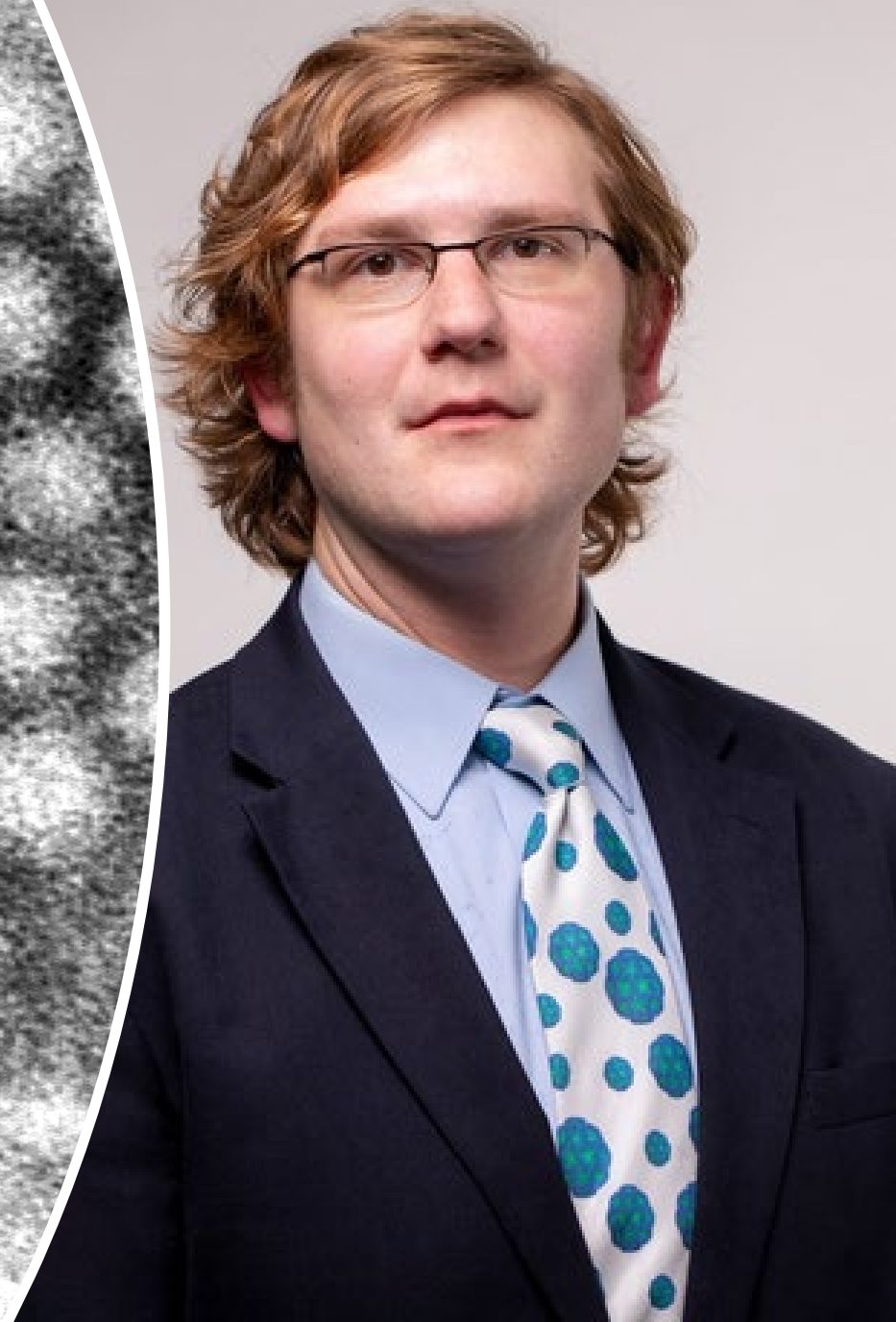


D. Julian McClements, Distinguished Prof,  
Dept of Food Science



Baoshan Xing, Distinguished Prof  
Director Stockbridge School of Ag.

Matthew Moore was awarded the Institute of Food Technologists 2024 Outstanding Young Scientist Award in honor of Samuel Cate Prescott





Lynne Adler from  
Dept of Biology  
won the 2023  
Mahoney Life  
Sciences Prize



RESEARCH ARTICLE | BIOLOGICAL SCIENCES | ✓

f X

## Flowering plant composition shapes pathogen infection intensity and reproduction in bumble bee colonies

Lynn S. Adler  , Nicholas A. Barber , Olivia M. Biller , and Rebecca E. Irwin  [Authors Info & Affiliations](#)

Edited by Nils Chr. Stenseth, University of Oslo, Oslo, Norway, and approved April 10, 2020 (received for review January 3, 2020)

May 11, 2020 | 117 (21) 11559-11565 | <https://doi.org/10.1073/pnas.2000074117>

Lynne McLandsborough  
of the Dept of Food  
Science won the 2024  
Mahoney Life Sciences  
prize



Food Microbiology | Research Article | 5 April 2023



## Oil-Based Sanitization in Low-Moisture Environments: Delivery of Acetic Acid with Water-in-Oil Emulsions

Authors: [Shihyu Chuang](#), [Mrinalini Ghoshal](#), [Lynne McLandsborough](#)   | [AUTHORS INFO & AFFILIATIONS](#)

DOI: <https://doi.org/10.1128/spectrum.05293-22> •  Check for updates





CAFE funds approx. 70 graduate students each summer with capacity funds





# Summer Scholars Program

- 35 Undergraduates Participate Yearly
- Summer research and Extension activities in PI laboratories
- Funded on private donations, Federal Capacity Funds, as well as an endowment



# Key Partners and Stakeholders

## The UMass Extension Board of Public Overseers

### Massachusetts State Agencies

- Department of Agricultural Resources
- Department of Energy Resources
- Department of Conservation Resources
- Division of Fisheries and Wildlife
- Department of Transitional Assistance

### Non-Profits

- MA 4-H Foundation
- Massachusetts Food System Collaborative
- Community Involved in Sustainable Agriculture (CISA)
- Southeastern Massachusetts Agricultural Partnership (SEMAP)
- The Massachusetts Forest Alliance

### Agriculture Commodity Groups

- Massachusetts Farm Bureau Federation
- Cape Cod Cranberry Growers Association
- Massachusetts Fruit Growers Association
- New England Vegetable and Berry Growers Association
- Massachusetts Nursery and Landscape Association
- Massachusetts Association of Landscape Professionals
- Massachusetts Association of Lawn Care Professionals
- Massachusetts Flower Growers
- New England Floriculture, Inc.
- Massachusetts Arborists Association
- UMass Alumni Turf Group
- New England Regional Turfgrass Foundation
- New England Sports Turf Managers Association
- Golf Course Superintendents Association of New England





## Challenges

- Meeting 1:1 funding match by the Commonwealth of Massachusetts in a transparent and auditable manner
- Assuring Farms have research-active faculty and staff.
- Aging infrastructure in laboratories and farm facilities

# Future Opportunities

- Increasing support of Massachusetts constituents in urban areas
- Climate change adaptation
- Greater alignment with State Agencies - Regulation - clean energy, soil, food policy

