

University of Connecticut Research and Extension and Connecticut Agricultural Experiment Station - Research Combined Plan of Work 2020-2024

Status: Final
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I. Plan Overview

1. Executive Summary

Over the past several years, new topics have emerged that are creating unique opportunities for research and extension to meet the needs of Connecticut's citizenry. The Connecticut Agricultural Experiment Station (hereafter designated CAES) and the University of Connecticut Storrs Agricultural Experiment Station and Cooperative Extension System (hereafter designated UConn) continue to partner in efforts to address these new challenges and opportunities.

This Plan of Work describes five critical issues for Connecticut that CAES and UConn jointly address. These include: (1) food, (2) health, (3), sustainability, (4) urban-rural interface, and (5) Long Island Sound.

Research and public engagement initiatives conducted in Connecticut often overlap into one or more of these areas. The food, health, and sustainability Venn diagram (http://bit.ly/UConn_Venn) is used by research and Extension at UConn to form collaborative program teams, and will be incorporated into the strategic planning process at UConn.

Funds are allocated separately to the two institutions, and as such, the report of accomplishments will continue to detail separate successes of CAES and UConn. Finally, we recognize that there will be emerging issues that we have not yet defined. These issues will be incorporated into the plan as they arise.

2. FTE Estimates

Year	1862 Extension	1862 Research
2020	64.0	80.0
2021	65.0	80.0
2022	66.0	80.0
2023	66.0	80.0
2024	66.0	80.0

II. Merit / Peer Review Process

The Merit Review process for CAES and UConn combines internal and external reviews. The peer review, conducted by disciplinary scientists, ensures the scientific merit and relevance of proposed projects. At CAES, proposed research will be of relevance sufficient for CAES management to make an informed decision on the appropriateness for federal and state support. Administrators in the respective organizations also review new Hatch or Extension projects. Appropriately qualified persons will evaluate proposals and experimental results against the NSF criteria of merit and peer-review. Scientific peer review of research proposals focuses on the suitability and validity of methods, originality of the topic area, and value of the work to the scientific community and public. The Director (or a designee of the Director) provides final approval on all submitted projects. In addition, CAES uses external peer reviews when publications or proposals generated from existing projects are submitted to journals and funding agencies, respectively.

Both organizations rely heavily on stakeholder input to identify new areas for research and Extension engagement programs. Research priorities continue to be based on stakeholder input and state needs. Stakeholders are often involved in the co-creation of knowledge through applied research programs. Engagement with stakeholders provides a unique and

critical relevance review - stakeholders help define and shape projects that are directly relevant to their production systems or environmental sustainability.

In 2018, UConn transitioned to a competitive process for distribution of capacity funds to projects. Department heads approve the proposals for submission. The proposal review process is designed to ensure that quality research projects are consistent with identified priorities. Project reviews involve other scientists, and/or administrators within UConn, and/or external University scientists. The peer review process provides principal investigators with additional counsel on research direction and implementation. Each proposal is reviewed by a primary and a secondary reviewer. A review panel meets to discuss each proposal and proposals are ranked based on scientific merit, applicants' experience, and relevance to NIFA and state agricultural priority areas. Proposals are selected based on the panels' recommendation and the Director's approval. A similar merit review process for Smith-Lever projects is in place. Proposals navigate an internal process with evaluation from an Extension team from a separate critical issue or program, prior to approval by the Director.

III. Stakeholder Input

1. Actions to Seek

Stakeholder input offers unique perspectives and relevance to research and public engagement in Connecticut. CAES and UConn will gather formal and informal stakeholder input across the state (and at national or international meetings). Presentations, interviews, workshops, and conferences offer informal opportunities to meet with impacted stakeholders and gather input. Methods used to seek input include survey instruments that collect feedback from participants about existing programs, email surveys to potential stakeholders regarding new or proposed programs, and direct comments captured following sponsored events.

The Dean of UConn's College of Agriculture, Health and Natural Resources will be conducting statewide listening sessions; coordinating with CAES to ensure both organizations have access to the stakeholder input. Information gathered at these sessions will drive the strategic planning process for UConn.

2. Methods to Identify

Both organizations will use several methods to identify diverse groups of stakeholders. We will use listening sessions, surveys, focus groups, program participation, and needs assessments to identify other individuals and groups. Formalized stakeholder input is offered through groups including the Dean's Advisory Board at UConn, county Extension Councils, and partner organizations. Extension administrators identified UConn students as a target audience, and we will include these individuals through various methods including surveys, on-campus events, and focus groups. Seniors, also referred to as older demographics, are an audience we have identified as needing the services provided by Extension. Our educators identified this model through their work with stakeholders, partners, and program participants, and will continue seeking input.

In addition, a partnership was established with the Mashantucket-Pequot Tribe. Through our partnership with the Mashantucket-Pequot Tribe on the USDA NIFA - FRTEP grant, we now receive direct input from this under-represented group. They will continue to provide input on programs being delivered in partnership with the tribe. Members of the tribe also have been exceedingly collaborative in sharing indigenous knowledge about plants, animals and the environment with UConn faculty and staff.

CAES and UConn continue seeking members from underrepresented groups to participate in programs and provide input into strategic areas for research and public engagement. UConn will continue offering programs in Spanish to encourage greater access and participation by Hispanic audiences. Feedback from specific ethnic and minority stakeholders on specialty crops will be sought for future experiments by CAES on these crops.

3. Methods to Collect

Both organizations will use survey instruments to collect input from program participants. This information improves educational outreach and identifies new program areas. Survey data will be collected from workshop participants, conference attendees, and audiences for scientific talks, stakeholders, and the citizenry. Needs assessment surveys will also gather data and shape future programs. CAES and UConn will continue partnering with state and federal agencies on multiple projects and programs. Direct input from state and federal agencies will be a key method for collecting input from targeted groups. Both organizations will continue to be active on social media including Facebook, Twitter, Instagram, blog sites, and YouTube. While these outlets are used primarily to push information, stakeholder engagement on social media will provide opportunities for public input on research and Extension programs from audiences we might not otherwise interact with.

4. How Considered

Stakeholder input will help identify immediate problems and align research and public engagement priorities. For example, experimental design is sometimes revised after receiving feedback from growers on field studies. In addition, stakeholder input will be considered when we redesign programs, initiate new programs, as a basis for grant proposals, and as a means for obtaining different perspectives when both organizations consider restructuring programs. Stakeholder attendance and participation in open house events and public meetings is essential to obtain valuable feedback. Judgment on accountability of how well funds are used for research ultimately rests with the stakeholders. Therefore, scientists and administrators in all programs will consider opinions and perceptions held by these groups. Once input is received, summaries of the comments will be transferred to the Department Heads and the Directors for consideration.

IV. Critical Issues

1 Sustainable agriculture and food supply

Description:

Ensuring a vibrant and sustainable agricultural industry and food supply is a key challenge. Addressing food issues on a state level is a component of solving global food security and food safety concerns. We are advancing innovative, sustainable approaches to agriculture that align with local resources and markets. This helps expand production and consumption of locally grown, safe, and nutritious foods, while promoting and supporting agricultural practices that encourage a healthy lifestyle. Non-food agriculture is a key component of our agricultural economy and supports infrastructure for food production. Innovative research and technical support help meet industry challenges for all agricultural sectors and increase contributions to the Connecticut economy.

Term: Long

Science Emphasis Areas

Agroclimate Science
Education and Multicultural Alliances
Environmental Systems
Food Safety
Human Nutrition
Sustainable Agricultural Production Systems
Youth Development

2 Enhancing health and well-being

Description:

Enhancing health and well-being locally, nationally and globally can help address a myriad of issues. The close association of humans, animals and the environment present an opportunity to build connections at the nexus of human, animal, plant, and environmental health. We will focus on preventative health measures that promote wellness through community nutrition, awareness and understanding of arthropod-borne infections, and other efforts. One key to preventative health measures involves encouraging healthy lifestyles among youth and families. We foster health equity, including food security, using a broad range of approaches that incorporate community engagement. Digital health technology and personalized lifestyle interventions informed by basic science can help optimize health. We also need to investigate how the built environment impacts human health and how we can design the built landscape to foster wellness.

Term: Long

Science Emphasis Areas

Education and Multicultural Alliances
Environmental Systems
Food Safety
Human Nutrition
Sustainable Agricultural Production Systems
Youth Development

3 Adaptation and resilience to a changing climate

Description:

Centuries of development in Connecticut have produced a complex mosaic of land uses that include urban, peri-urban, agricultural, rural, and natural spaces. Defining a sustainable future for these complex spaces involves understanding how the built environment and the natural environment interact – particularly in the context of a variable climate. Research must engage, educate and inform citizens and decision-makers in climate adaptation. Enhancing the management and conservation of ecosystems is of importance to the protection and restoration of natural resources, understanding human impacts on the environment and dealing with the threats of invasive species and, habitat loss, as well as resource contamination and degradation. We also must explore how renewable energy sources can reduce our carbon footprint and lessen our impacts on regional and global climate to promote human, plant and animal health that is resilient to the effects of climate change.

Term: Long

Science Emphasis Areas

Agroclimate Science
Bioeconomy, Bioenergy, and Bioproducts
Education and Multicultural Alliances
Environmental Systems
Sustainable Agricultural Production Systems
Youth Development

4 Sustainable landscapes across urban-rural interfaces

Description:

In Connecticut and the northeast, cities and urban centers are tightly juxtaposed with rural or agricultural communities. The interface of rural and urban environments creates unique opportunities to investigate issues related to food, crop production, transport, waste, housing, and energy systems, including the state's water resources. Long Island Sound (LIS) is a unique natural asset to our state with immense economic, social-cultural and ecological value. Several water bodies flow into LIS making it sensitive to upstream agricultural, industrial and municipal land uses. In addition, urban areas offer economic development opportunities for agricultural enterprises, as well as enhance other ecosystem services. At the same time, urban encroachment into agricultural communities can generate conflict over impacts on the natural environment and loss of farmland. Research and public engagement conducted at the interface of urban and rural communities offers the unique opportunity to explore complex biophysical, social and economic issues affecting agricultural communities.

Term: Long

Science Emphasis Areas

Agroclimate Science
Education and Multicultural Alliances
Environmental Systems
Family & Consumer Sciences
Youth Development

5 Long Island Sound

Description:

The Long Island Sound (LIS) is a unique natural asset to our state, as it has immense economic, social-cultural, and ecological value. The LIS is surrounded by high concentrations of coastal populations. The area hosts an array of coastal and marine recreational and industrial uses. Several water bodies flow into LIS making it sensitive to upstream agricultural, industrial and municipal land uses, and nutrient loading from point and non-point sources. At the same time, aquaculture production in LIS is growing, emphasizing the need to protect water quality. Furthermore, communities along the LIS have experienced the negative impacts of climate change and focus on socio-ecological resilience of the LIS is increasing.

Term: Long

Science Emphasis Areas