University of Rhode Island Combined Research and Extension Plan of Work
2022-2026

Status: Final
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I. Plan Overview

1. Executive Summary

The URI College of the Environment and Life Sciences (CELS) is the home of Rhode Island's Agricultural Experiment Station (AES) and Cooperative Extension (Extension). URI's land grant programs address a wide range of national and international issues, with an emphasis on the needs of our state. The research conducted through the AES is broad based, spanning disciplines from the natural sciences to the social sciences, capitalizing on the specialized knowledge of our faculty. Our Extension programs seek to improve Rhode Islanders' quality of life, their livelihoods, and the health of our natural environment, with special attention to local problems. We emphasize close integration of research and extension in our programs to create the greatest value from URI’s land-grant funding.

A recent CELS Strategic Plan for 2019 – 2023 identifies the following goals for research.

By 2023, CELS researchers will have increased our ability to:

respond and adapt to local, regional, and global environmental changes;
sustainably grow, harvest, market and consume food from terrestrial and aquatic species;
recognize and manage emergent human and environmental health challenges; and
understand (a) biodiversity at multiple scales from genomes to ecosystems and (b) how the evolution and ecology of organisms affects environmental and ecosystem health.

In addition, the following goals were identified for Cooperative Extension.

By 2023, URI Cooperative Extension will have strengthened the capacity of Rhode Islanders to:

Grow, process, and provide safe and nutritious food, and to better manage wild fisheries;
Take actions that promote healthy lifestyles;
Be strong stewards of the state’s urban, suburban, rural and coastal landscapes;
Assess water resources and apply management practices to restore and protect those resources; and
Address current and future energy challenges related to sustainable energy consumption and production.

Accordingly, CELS has selected four critical issues to be the focus of AES and Extension programs over the next five years. They are:

Agriculture and Food Systems
Human and Environmental Health
Local to Global Environmental Change
Youth, Family and Community Development

2. FTE Estimates

Year	1862 Extension	1862 Research
2022	14.0	15.0
2023	14.0	15.0
2024	14.0	15.0
2025	14.0	15.0
2026	14.0	15.0

II. Merit / Peer Review Process

AES-funded research projects undergo institutional peer review prior to submission to NIFA for review and approval. In this multi-step process, the Experiment Station Director assesses the project's fit and relevance to URI's critical issues, a member of the CELS faculty with relevant expertise evaluates the technical merit of the proposed work, and the Experiment Station Director evaluates how well the proposer subsequently responds to the peer reviewer's comments. Once those steps are completed satisfactorily, the proposal is finalized and submitted to NIFA. Proposed multi-state projects are evaluated by the Experiment Station Director for relevance to URI's critical issues, by the leader of the relevant multi-state project for relevance to the goals of the project, and for technical merit by a relevant member of the CELS faculty. We seek NIFA approval after these steps are completed.

Extension programs are evaluated for progress toward goals and sub-goals described in the 2018 – 2022 Cooperative Extension Strategic Plan by reporting to the Director on program-identified metrics. Evaluation results will be used to guide resource allocation and future programming decisions.

III. Stakeholder Input

1. Actions to Seek

Stakeholder input is captured through a variety of mechanisms throughout the year. Stakeholder feedback is sought after most Extension workshops and meetings to ensure that our programs are meeting their needs. Research faculty routinely present the results of their work to interested government, industry and community groups (as well as the academic community) and use feedback from those groups to inform their future research directions. Primary actions used by our faculty and staff to seek stakeholder input include inviting the general public and/or stakeholders to a meeting, listening session or other stakeholder event; and inviting stakeholders to complete a survey about research or extension needs. They also participate on committees and/or working groups with various stakeholder groups when that is appropriate.

For example, in the Agriculture and Food Systems Critical Issue area, our food safety program seeks input from individuals invited to food safety workshops using Facebook, direct emails, and on-farm visits. Stakeholders of this research and extension program include consumers, food manufacturing personnel, seafood processing personnel, retail foodservice personnel, growers, and farmer's market managers. State partners include the RI Department of Health, RI Department of Environmental Management, RI Food Policy Council, and the RI Food Safety Task Force.

Rhode Island's animal farmers (terrestrial and marine) are contacted by text and email messages, while vegetable growers receive surveys seeking feedback on production issues and are contacted via email, text message, and phone. They also receive 16 issues of URI's publication named "The Week in Vegetables' which requests input on issues affecting growers.

Stakeholders of our animal-based research and extension programs include terrestrial (mostly ruminants) and marine (bivalve mollusks such as oyster and clams) growers, environmental managers and conservation specialists; non-governmental agencies involved in restoration (e.g. The Nature Conservancy) and researchers in the areas of animal (epi) genomics, breeding and health (e.g. East Coast Shellfish Breeding Consortium). State partners include the East Coast Shellfish Growers Association, RI Coastal Resources Management Council, RI Raised Livestock Association, and the RI Department of Environmental Management.

Primary stakeholders of our vegetable production program include commercial vegetable producers in Southern New England. State partners include the RI Fruit Growers Association, RI Nursery and Landscape Association, RI Farm Bureau, Northeast Organic Farmers Association of RI, and Southside Community Land Trust.

Similar information is available for programs in URI's other Critical Issue areas, but space is not available to report it here.

2. Methods to Identify

CELS hosts three committees that play a role in identifying individuals and groups who are stakeholders and in collecting input from them. Two of those committees, the Research Committee and the Cooperative Extension and Outreach Coordinating Committee, are responsible for advising and assisting the Dean and Associate Deans in planning and reviewing programs for the college. A combination of faculty/staff and external partners serve on these committees and are expected to consider the needs of a broad set of stakeholders in formulating their recommendations. The third committee, the Agricultural Industry Advisory Group, advises the Dean on a wide range of issues related to CELS, including its land-grant programs. The College also utilizes Rhode Island's CARET representatives for stakeholder input. Primary methods used by our faculty and staff to identify individuals and groups include surveys of groups or individuals; consultation with advisory committees; and holding public meetings or listening sessions. Programs relying heavily on technology to engage with their audiences assess demographics of website visitors to identify stakeholders.

For example, in the Agriculture and Food Systems Critical Issue area, our food safety research and extension program consults with an advisory committee and conducts needs assessments. Our animal based programs identify stakeholders by engaging with members of the producer community, which is small in RI, and by participating in meetings of the East Coast and Pacific Coast Shellfish Growers Associations, the RI Food Policy Council, the Tri-State SARE advisory council, and the Southern New England Livestock Conference. Our vegetable production team networks with urban agriculture service providers and farmers, has regular in-person, email, and telephone contact with growers, and engages with the New England Vegetable and Berry Growers Association.

Similar information is available for programs in URI's other Critical Issue areas, but space is not available to report it here.

3. Methods to Collect

As was stated previously, stakeholder input is captured through a variety of mechanisms throughout the year. These include discussions and surveys of participating stakeholders at Extension workshops and meetings, as well as discussions before, during, and after faculty presentations of their research to interested industry and community groups. Input is also collected through the discussions and work of the Research Committee, the Cooperative Extension and Outreach Coordinating Committee, and the Dean's Agriculture Industry Advisory Group. Primary methods used by our faculty and staff to collect stakeholder input are meetings with traditional and non-traditional stakeholders, including those held specifically to learn about needs of non-traditional stakeholders; meetings with the general public; and surveys of traditional stakeholders. Individual interviews with stakeholders are also conducted for some program areas.

For example, in the Agriculture and Food Systems Critical Issue area, our food safety program holds meetings with stakeholders, conducts program evaluations to identify needs, and writes a newsletter targeting the seafood industry. Our animal based programs meet with producers one-on-one and in small groups and at conferences attended by industry such as the Conference of Research Workers in Animal Diseases, the annual meetings of the American Association of Animal Science, the Plant and Animal Genomes meetings, the annual meeting of the National Shellfisheries Association, the Milford Aquaculture Seminar, and the annual meeting of the Pacific Coast Shellfish Growers Association. Our vegetable production team uses mass email announcements of meetings that take place at URI, on private farms, other sites, and online; writes 16 vegetable newsletters per year; writes periodic IPM newsletters; sends surveys; interviews key informants at the New England Vegetable and Fruit Conference, and makes phone calls or in-person visits to farmers.

Similar information is available for programs in URI's other Critical Issue areas, but space is not available to report it here.

4. How Considered

Stakeholder input is used to inform a number of decisions throughout the year, including priority setting and action planning. Our researchers and extension experts incorporate stakeholder input into their thinking, planning, program/project development and implementation over time. The Dean and Associate Deans use stakeholder input to inform decisions related to budget development and staffing. All parties use stakeholder input to identify emerging issues, which can result in the redirection of research and extension programs, and the acquisition of extramural resources when possible.

For example, in the Agriculture and Food Systems Critical Issue area, our food Safety program uses stakeholder input to plan and modify program priorities. Our animal-based programs use it to identify emerging issues regarding animal performance and health (such as disease outbreaks) and determine traits to be targeted in genetic and epigenetic research. Our vegetable production program uses it to decide which vegetable crops to trial each year and what varieties to include in the trails. More generally, the program uses it to identify emerging issues and determine whether they are specific to certain farms or are common to many farms. This information allows the team to shift their efforts into areas of current importance for the state's vegetable producers.

Similar information is available for programs in URI's other Critical Issue areas, but space is not available to report it here.

IV. Critical Issues

1 Agriculture and Food Systems

Description:

New England aims to produce 50% of its food by the year 2060. Rhode Island's AES and Extension programs will support this effort through a systems-based, interdisciplinary approach to agriculture, aquaculture, fisheries, food policy and economics, food safety, and food innovation. Through our research and Extension programs, we will work toward economically, socially, and ecologically sustainable production, management, and consumption of land and water-based plant and animal species.

Below are Research and Cooperative Extension goals taken from the 2018-2023 URI College of the Environment and Life Sciences Strategic Plan. Sub-goals for each goal do not fit in the space provided here, but have been included in the NIFA Reporting System.

Research: CELS researchers will increase our ability on local, regional, and global levels to sustainable grow, harvest, market and consume food from both terrestrial and aquatic species.Cooperative Extension Goal: Strengthen Rhode Island's food and agricultural systems by increasing Rhode Islanders' capacity to grow, process and provide safe and nutritious food, and to better manage wild fisheries in Rhode Island and abroad.

Cooperative Extension: Strengthen Rhode Island's food and agricultural systems by increasing Rhode Islanders' capacity to grow, process and provide safe and nutritious food, and to better manage wild fisheries in Rhode Island and abroad.

Term: Long

Science Emphasis Areas

Environmental Systems
Food Safety
Sustainable Agricultural Production Systems

2 Human and Environmental Health

Description:

Understanding how environment affects health is critical to curbing the rise of diseases associated with environmental exposures and lifestyle choices. Rhode Island's AES and Extension programs work toward improved management of human and environmental health challenges by studying the molecular basis of infectious and noninfectious human, animal, and plant diseases; mechanisms of antibiotic resistance; and the design of new vaccines and probiotics. Our programs also address the distribution and impacts of health challenges across communities, including factors affecting nutrition and physical activity, and those associated with tick-borne illness.

Below are Research and Cooperative Extension goals taken from the 2018-2023 URI College of the Environment and Life Sciences Strategic Plan. Sub-Goals for each goal do not fit in the space provided here, but have been included in the NIFA Reporting System.

Research: Increase our ability to recognize and manage emergent human and environmental health challenges.

Cooperative Extension: Strengthen the ability of Rhode Islanders to take actions that promote healthy lifestyles and result in improved nutrition and physical activity, reduced risk of vector-borne diseases, and improved physical, social, and emotional health.

Term: Long

Science Emphasis Areas
Family & Consumer Sciences
Human Nutrition
Sustainable Agricultural Production Systems

3 Local to Global Environmental Change

Description:
Environmental change presents significant challenges to natural systems and the societies that rely on them. Rhode Island's AES and Extension programs enable communities to cope with changing hazards associated with sea-level rise; stronger coastal storms; increasing water temperature; impacts to water quality and availability; ocean acidification; changing disease patterns; invasive species; and biological invasions. We also seek to mitigate global environmental change by understanding the social and biological consequences of transitioning to renewable energy technologies.

Below are Research and Cooperative Extension goals taken from the 2018-2023 URI College of the Environment and Life Sciences Strategic Plan.

Research: 1) Increase our ability to respond and adapt to local, regional, and global environmental changes; 2): increase our understanding of biodiversity at multiple scales from genomes to ecosystems; and how the evolution and ecology of organisms affects environmental and ecosystem health.

Cooperative Extension: 1) Provide leadership, information, and guidance on the stewardship of land including urban, suburban, rural, and coastal landscapes to achieve ecosystem resilience, water resource protection, forest management, and economic and agricultural viability; 2) Expand the capacity of Rhode Islanders to assess water resources and apply management practices to restore and protect water resources; 3) Strengthen the capacity of Rhode Islanders to face current and future energy challenges related to sustainable energy consumption and production.

Term: Long

Science Emphasis Areas
Environmental Systems
Family & Consumer Sciences
Sustainable Agricultural Production Systems

4 Youth, Family, and Community Development

Description:
Numerous social, environmental, and economic challenges affect the health and success of Rhode Island's youth, families, and communities. Rhode Island's AES and Extension programs use a variety of approaches to address these issues, including economics, social science, historical analysis, and information technology. Our faculty study the social context of teaching and learning as it pertains to at-risk and under-represented minority populations; barriers and motivators influencing family financial decision-making; the history of gender and development; tourism and development; and community disaster planning. We also advance positive youth development through 4-H with an emphasis on science and technology, leadership, life skills, and healthy living.

Below are Research and Cooperative Extension goals taken from the 2018-2023 URI College of the Environment

and Life Sciences Strategic Plan. Sub-goals for each goal do not fit in the space provided here, but have been included in the NIFA Reporting System.

Research: Increase our ability to understand, respond, and adapt to social, environmental, and economic challenges facing Rhode Island's youth, families, and communities.

Cooperative Extension: Improve the physical, social, and emotional well-being of Rhode Island's youth population by expanding activities, events, and educational experiences related to science and technology, leadership, life skills, and healthy living.

Term: Long

Science Emphasis Areas
Education and Multicultural Alliances
Family & Consumer Sciences
Youth Development