

# University of Wisconsin Madison Combined Research and Extension Plan of Work 2021-2025

**Status: Final**  
**Date: 06/22/2020**

## **I. Plan Overview**

### **1. Executive Summary**

The Wisconsin Agricultural Experiment Station (WAES) and the University of Wisconsin-Madison Division of Extension (Extension) are partners in an effort to generate new research-based knowledge to Wisconsin's residents and communities to help address challenges and reach their goals.

Priorities are aligned with input from stakeholders with interests in traditional and non-traditional agriculture, natural resources, human health, human development and relationships, positive youth development, and community wellbeing. We receive input from these stakeholders through conversations and correspondences, public meetings such as field days at Agricultural Research Stations, and through other Extension-facilitated events that include collaborations between Extension faculty, program leadership, and county-based educators.

This input informs decisions about the types of research to conduct as well as the design of educational initiatives conducted by Extension in partnership with local, state, tribal and regional organizations, farmers, consumers, business owners and entrepreneurs, support services, coalitions, decision makers, and public and tribal government agencies.

Importance of Hatch/Smith Lever capacity funds:

The success of our statewide educational efforts is founded on the generation of new, relevant knowledge through peer-reviewed, investigator-driven research supported by capacity grant funding. We seek to allocate these funds in a manner that best addresses the needs of our stakeholders.

WAES uses Hatch funds to support approximately 110 to 130 projects each year, which are distributed among our 17 departments and the Wisconsin Crop Improvement Center. More importantly, these funds are used to support graduate students. Research focuses on various topics such as: dairy, animal health, crop yield, pesticide management, nutrition, food safety, education for future farmers, water resources, and community development. We continually re-examine our research portfolio in order to address short, intermediate, and long-term issues to ensure that we invest in projects that are relevant to NIFA national goals and focus on current state research needs.

Extension's capacity-funded programs are organized within and across program Institutes to address issues important to agriculture, businesses, communities, families, and youth across the state. Extension operates six Institutes that are co-funded through Smith-Lever funding: Agriculture, Community Development, Health and Well-Being, Human Development and Relationships, Natural Resources, and Positive Youth Development. While these Institutes are also partially funded through other sources, Smith-Lever funding provides the fiscal basis for our state-wide research and outreach work.

Further, Smith-Lever funding allows us to apply to, and efficiently leverage, additional funding in service of our programmatic priorities.

Within our six Institutes, Extension operates 29 Extension Programs organized around more specific topics, such as Dairy, Land and Water, Local Government Education, Healthy Eating and Active Living, Financial Security, and Wisconsin 4-H. Additionally, Extension operates the Lake Superior National Estuarine Research Reserve and Upham Woods Outdoor Learning Center. Through Smith-Lever funding, Extension invests in faculty and staff located in various UW-Madison schools and colleges as well as at UW-Green Bay, UW-Platteville, UW-River Falls, and UW-Stevens Point. Capacity funds are invested in campus and county-based faculty and staff to provide capacity for growing applied research programs and to develop, deliver, and expand access to educational programs for the people of Wisconsin. Our approach mirrors the integrated research, Extension, and multi-state expectations of USDA NIFA. At the institutional level, we are focusing on outcomes and impact indicators associated with our educational priorities. Specifically, we are refining common indicators at the state level that align with our program planning process and targeted outcomes.

#### Meeting National Priorities/Critical Issues:

This Institutional Profile combines research and Extension efforts to describe how statewide interdisciplinary campus and county faculty, staff, and colleagues provide research-based education and assistance to sustain and grow the state's vital agricultural economy and well-being of residents across national priorities. To better align with the recent reorganization of the University of Wisconsin System, WAES and Extension have updated the critical issues (from the 2017 Plan of Work) for FY 20 and beyond.

#### Sustainable Ag Systems and Production:

WAES and Extension conduct research to help develop sustainable food production systems that enhance water quality, and improve animal, soil and crop health, while increasing productivity. The demand for goods and services will only increase in the future as the population grows, and it is our mission to find new ways to increase production while minimizing environmental impacts, such as greenhouse gas emissions and nutrient losses.

#### Food Accessibility, Safety and Nutrition:

WAES and Extension provide research-based education and assistance with the goal of improving food security by increasing access to healthy foods for vulnerable populations and those in need; responding to growing consumer demands for sustainably produced local foods, including strengthening local food markets and systems; and promoting healthy diets. Research also focuses on ways to understand and reduce food-borne illnesses, while developing and disseminating new technologies to improve food safety.

#### Energy and Sustainability of Natural Resources:

WAES and Extension conduct research and outreach on climate change impacts and natural resources conservation to support communities, agriculture, local economies, and human health. Projects seek to advance sustainable forest management, minimize pesticide use, improve water quality and quantity on working lands, and improve soil health.

Urban and Rural Community Vitality:

To promote community development, WAES and Extension help inform and teach decision-makers, community members, farmers and their families of ways to promote success in farming and other economic sectors, in community organizing, and improve the overall quality of life.

Positive Youth Development:

Extension and WAES prepare the youth of today to become the effective, empathetic adults of tomorrow. Our research-based youth enrichment programs build youth and adult capacity and partnerships that help both sides grow. 4-H clubs, camps, and afterschool programs give young people the hands-on experiences they need to develop an understanding of themselves and the world.

Human Development and Relationships:

Extension and WAES provide the tools Wisconsinites need to thrive as well-rounded, capable individuals and families. We support families in caring for each other in ways that promote growth and understanding. Our programs promote aging-friendly communities, coach effective parents, and help families put technology, mindfulness, and financial awareness to use.

Wisconsin Competitive Program:

WAES addresses several state priority issues that cannot be classified in the above critical issues. These projects contribute to several areas, including management of invasive exotic organisms.

**2. FTE Estimates**

Year	1862 Extension	1862 Research
2021	89.0	133.0
2022	89.0	133.0
2023	89.0	133.0
2024	89.0	133.0
2025	89.0	133.0

**II. Merit / Peer Review Process**

The merit review process for WAES consists of a combined external and internal university panel. A 10-person faculty

Research Advisory Committee (RAC), appointed by the CALS Associate Director of the Agricultural Experiment Station, reviews proposals for capacity grant funding on the UW-Madison campus. Two RAC members (designated primary and secondary reviewers) and by two-non committee members review each proposal. These members, established experts in their fields, are drawn from the Madison campus, other UW campuses, state agencies, non-governmental organizations, and other states. The reviewers consider a proposal's scientific merit and relevance to program guidelines, as well as to national goals and emphases areas, pertinence to state problems and priorities, relationship to multistate projects, and inclusion of integrated activity.

Extension activities are determined and reviewed through ongoing assessment of local needs and program planning processes. Extension Programs develop annual program plans of work, and those guide the development of individual plans of work for faculty and staff. Plans of work describe the specific needs to be addressed, as well as target audiences, racial equity strategies, intended outcomes, action plans for how to achieve outcomes, and evaluation plans. Program leadership and by Area Extension Directors review these plans of work then serve as a roadmap for subsequent programmatic assessments of community impact. Extension curricula and publications are peer reviewed by research and Extension faculty, government or industry colleagues, and professionals as appropriate to the content, purpose, and intended audience. Additionally, scholarly peer review and cultural review assure the quality and relevance of educational materials and outreach scholarship.

Extension has actively developed and is expanding a multi-cultural and multi-linguistic programming portfolio that acknowledges Wisconsin as a culturally and linguistically diverse state. Review and management by our nationally recognized Language Access Team assure the educational and scientific quality of this portfolio, and ensures the cultural appropriateness and effectiveness, of our translations and interpretations.

### **III. Stakeholder Input**

#### **1. Actions to Seek**

We use several options to seek stakeholder input. Examples are: Public meetings and listening sessions, utilizing media to advertise, and engaging the general public and more targeted stakeholder groups through outreach, needs assessment, and evaluation.

Stakeholder identification and involvement are key components to the planning processes. The UW-Madison/WAES/CALS administrative leadership group maintains close relationships with leaders of the industries and advocacy groups interested in the disciplines we study. The CALS Administrative Leadership group holds sessions with agricultural industry leaders, heads of state agencies, our own Board of Visitors, and specific commodity groups. The dean attends a joint meeting of the Wisconsin Agricultural Coalition at least twice annually; this group is made up of executive directors of each of the Wisconsin commodity groups. The Administrative Leadership group also attends several field days at our 12 agricultural research stations located throughout the state. These field days and other public events allow for interaction with a variety of producers and growers representing the breadth of Wisconsin's diverse agriculture.

Extension is continually engaged in stakeholder input. Given our place-based organizational model, we are deeply embedded in communities and regularly gather stakeholder input through both formal (e.g., focus groups and listening sessions) and informal methods. For example, Area Extension Directors lead our 21 local administrative areas, and educators identify local needs in collaboration with stakeholders through ongoing needs assessments and annual work planning processes. In addition, the Dean and program leadership frequently meet with partner organizations, representatives from stakeholder groups, and federal, state, and local elected officials. Extension also meets with our

Board of Visitors bi-annually to gather input related to our programming and operations.

## **2. Methods to Identify**

We use various methods to identify our stakeholders. Examples are: -Advisory committees -Focus groups -Surveys  
-Listening sessions -Public events

CALS and Extension leadership maintain a close relationship with leaders of the industries and advocacy groups that have an interest in disciplines we study. In addition, regularly attending field days, hosted at our 12 agricultural research stations, and other public events (eg. World Dairy Expo) allow leaders to personally interact with a variety of producers and growers (offering advice to explore new stakeholders) representing the breadth of Wisconsin agriculture. We intentionally reach out to groups organized around new and expanding Wisconsin agricultural sectors. In the 2018, Developmental Situational Analysis (Extension's statewide needs assessment), diverse county funding partners, including Administrators, Executives, Administrative Coordinators, and County Board Chairs, were identified because they were determined to be the local funding partners that know Extension best and could provide the most relevant input. Twenty-two Area Work Groups engaged those partners and made hard decisions of which local data resources to review. This was based on recommendations from program leadership but mainly based on their own local knowledge of which information was up-to-date, most relevant, most comprehensive, and representative of the diversity of needs and perspectives in their communities. Members of Extension's Board of Visitors were identified via leadership seeking out multiple perspectives and by asking Extension colleagues to make membership recommendation.

## **3. Methods to Collect**

Stakeholders' input for the development and conduct of research relating to state needs are accomplished in a tiered system. Many departments, centers, and institutes maintain advisory committees that meet periodically with researchers in the units. Departments convey this input to the CALS Administrative Leadership Group.

A Board of Visitors advises CALS and meets with the Administrative Leadership Group twice a year. That board includes accomplished and influential individuals representing a number of interest groups, including agriculture producers, industries, consumers, environmentalists, and state agencies. In addition to advising CALS on research and outreach needs, the board provides a source of contacts of various constituencies.

Extension's Board of Visitors meets with the Dean's Leadership Team. Input has been gathered by Extension from diverse partners and stakeholders statewide through needs assessments led by individual educators and broader needs assessments done at administrative area levels and statewide levels. We also collect stakeholder input through program planning, implementation, and evaluation efforts. Statewide team efforts accord with the local context, where all 72 Wisconsin county Extension offices have civil rights plans designed to increase access to traditionally underserved audiences.

## **4. How Considered**

Stakeholder input is considered in various ways. Examples are:

- Budget process
- Identify emerging issues and in some cases desired outcomes related to those issues
- Action plans (e.g. developing and evaluating programs)
- Redirect Extension and Research program areas
- Hiring process

Stakeholder input forms a critical cornerstone in the way that we develop all of our programming allows us to identify priority issues and avenues for resolving those issues. Driven by such input, program planning and evaluation practices are ongoing and produce evidence for driving decision-making on the priority issues. Decision-making unfolds in many ways, including the following: a.) incorporating input into WAES-Extension budget and staffing decisions through statewide Extension teams, b.) shaping team implementation and evaluation plans as well as statewide federal plans of work; c.) combining input with available research is used to refine program design, and d.) our workforce's expertise and ability to bring the right people and partners together to address a priority issue ensures continued input.

## **IV. Critical Issues**

### **1 Sustainable Ag Systems and Production**

#### **Description:**

WAES and Extension conduct research to develop sustainable food production systems that enhance soil, water, animal, and crop health while increasing productivity. The demand for goods and services will only increase in the future as the population grows, and it is our mission to find new ways to increase production while minimizing environmental impacts, such as greenhouse gas emissions and nutrient losses.

**Term:** Long

#### **Science Emphasis Areas**

Sustainable Agricultural Production Systems

### **2 Food Accessibility, Safety and Nutrition**

#### **Description:**

WAES and Extension provide research-based education and assistance to improve food security by increasing access to healthy foods for vulnerable populations and those in need; responding to growing consumer demands for sustainably produced local foods, strengthening local food markets and systems; and promoting healthy diets. Research also focuses on understanding and reducing food-borne illnesses, while developing and disseminating new technologies to improve food safety.

**Term:** Long

#### **Science Emphasis Areas**

Family & Consumer Sciences

Food Safety

Human Nutrition

Youth Development

### **3 Energy and Sustainability of Natural Resources**

#### **Description:**

WAES and Extension conduct research and outreach on climate change impacts and natural resources conservation to support communities, agriculture, local economies and human health. Projects seek to advance sustainable forest management, minimize pesticide use, improve water quality and quantity on working lands, and improve soil health.

**Term:** Long

#### **Science Emphasis Areas**

Agroclimate Science

Bioeconomy, Bioenergy, and Bioproducts

Environmental Systems  
Youth Development

#### **4 Urban and Rural Community Vitality**

**Description:**

To promote community development, WAES and Extension help inform and teach decision-makers, community members, and farmers and their families of ways to promote success in farming and other economic sectors, in community organizing, and improve the overall quality of life.

**Term:** Long

**Science Emphasis Areas**

Education and Multicultural Alliances  
Environmental Systems  
Family & Consumer Sciences  
Sustainable Agricultural Production Systems  
Youth Development

#### **5 Positive Youth Development**

**Description:**

Extension prepare the youth of today to become the effective, empathetic adults of tomorrow. Our research-based youth enrichment programs build youth and adult capacity and partnerships that help both sides grow. 4-H clubs, camps, and afterschool programs give young people the hands-on experiences they need to develop an understanding of themselves and the world.

**Term:** Long

**Science Emphasis Areas**

Family & Consumer Sciences  
Youth Development

#### **6 Human Development and Relationships**

**Description:**

Extension provide the tools Wisconsinites need to thrive as well-rounded, capable individuals and families. We support families in caring for each other in ways that promote growth and understanding. Our programs promote aging-friendly communities, coach effective parents, and help families put technology, mindfulness, and financial awareness to use.

**Term:** Long

**Science Emphasis Areas**

Family & Consumer Sciences  
Youth Development

#### **7 Wisconsin Competitive Program**

**Description:**

WAES addresses several state priority issues that cannot be classified in the above critical issues. These projects contribute to several areas such as the management of invasive exotic organisms.

**Term:** Long

**Science Emphasis Areas**

Agroclimate Science

Bioeconomy, Bioenergy, and Bioproducts

Environmental Systems

Family & Consumer Sciences

Food Safety

Human Nutrition

Sustainable Agricultural Production Systems