

## University of Wisconsin-Madison, Agricultural Research Stations Strategic Planning and Priorities - Executive Summary

**Project Purpose.** To develop principles and guidelines, consistent with the College of Agricultural and Life Sciences (CALs) Strategic Plan, for robust decision-making regarding form and function of the Agricultural Research Stations (ARS).

### **Agricultural Research Station's Mission Statement.**

*To provide facilities and support for CALs faculty and academic staff-led research programs and associated education and outreach programs.*

### **Ranked Guiding Principles of the Agricultural Research Stations are to...**

- 1) *Support faculty and staff-led, individual and interdisciplinary research activities that encompass the mission of UW CALS.*
- 2) *Maintain a unique and stable portfolio of research and associated education, outreach and support activities.*
- 3) *Foster research-driven collaborations with CALS Departments, University of Wisconsin System campuses (e.g. UWEX), USDA-ARS, public and private universities, state agencies, nongovernmental organizations, and private sector entities.*
- 4) *Act as regional ambassadors to promote public engagement through instruction and outreach to the local and regional community.*
- 5) *Seek greater effectiveness and efficiency in administrative services.*
- 6) *Create revenue streams to support the mission and activities that align with the stations' portfolio of current projects.*

## University of Wisconsin-Madison, Agricultural Research Stations Strategic Planning and Priorities, Final Report

### *Project Purpose:*

To develop principles and guidelines, consistent with the College of Agricultural and Life Sciences (CAL S) Strategic Plan, for robust decision-making regarding form and function of the Agricultural Research Stations (ARS).

### *ARS Priorities and Planning Committee Participants:*

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- Richard Lindroth, Ex-officio Member, Professor and Associate Dean for Research, and Associate Director of the Agricultural Experiment Station, [lindroth@wisc.edu](mailto:lindroth@wisc.edu)

### *Project Goals and Scope:*

The primary goal of this CALS Priorities and Planning Exercise was to provide a comprehensive set of principles and guidelines to assist in development of the form and function of the twelve CALS, ARS of the University of Wisconsin-Madison. More specifically, the scope of the exercise included:

- A clarification of the mission of the ARS.
- The development and ranking of principles and guidelines, consistent with the CALS Strategic Plan, for robust decision-making regarding the form and function of CALS ARS.
- Identification of the principal commodity groups, special interest groups, communities and industry that interact directly with ARS and how they influence research, outreach/extension, teaching, and resource allocation.
- Recognition of the changing needs of agriculture in Wisconsin and how the ARS can help address issues affecting agriculture and natural resource conservation and management.

### *Statement of Need:*

It is of critical importance to recognize the historical and current contributions made by ARS in the State of Wisconsin. CALS recognizes and affirms that the ARS have been an essential resource for the ability to conduct applied research, and to a lesser degree, basic research in agriculture and natural resource conservation and management. Furthermore, CALS recognizes that support of ARS should remain a high priority for the College. However, the demographic makeup and the agricultural landscape continue to change in Wisconsin, and agriculture in the State will certainly continue to transition.

Wisconsin's farms and agricultural businesses generate \$88.3 billion annually in economic activity and 413,500 jobs (Deller 2012). In 2012 it was estimated that agriculture in the State accounted for 11.9 percent of the state's overall employment (up from 10 percent in 2007), 10.9 percent of labor income, 10.9 percent of total income, and 16.1 percent of industrial sales. About one in nine people working in Wisconsin holds a job related to agriculture, the new study indicates. Those jobs include farmers, their employees and those providing them with goods and services—veterinarians, crop and livestock consultants, feed and fuel suppliers, equipment dealers and lenders—as well as those employed in equipment manufacturing and food processing. And it is important to recognize that agriculture is diverse and is likely becoming more diversified across the state, with increasing investments in activities like specialty crops and livestock.

Recognizing the value of field research stations and other natural resource laboratories for research, education, and public outreach has been a recent focus of the National Science Foundation, through efforts of the National Research Council of the National Academies (National Research Council, Enhancing the Value and Sustainability of Field Stations and Marine Laboratories in the 21st Century). Specifically, the Council attempted to address the value to science, education, and outreach at agricultural and field research stations in the US; and to outline strategies to meet future research, education, outreach, infrastructure, and logistical needs of field stations, in light of their current challenges. Additionally, the report examined ways in which field stations could network more broadly with stakeholders and partners, and suggested long-term financial strategies to sustain field stations missions.

And not unlike the current circumstances confronted by CALS ARS, the report recognized that today's field research stations still provide a solid platform to aid in the completion of the College's mission. Many, however, need enhancements of infrastructure and leadership if they are to advance our priority themes highlighted in the recent CALS Strategic Planning process. One overarching goal of this Strategic Planning and Priorities document for the UW CALS ARS, focuses on the development of guidelines designed to provide a decision-making framework for the future capabilities of ARS.

### *Background:*

- Previous Agricultural Research Station Assessments:

In the past decade, CALS has recognized the need to make substantive improvements to the ARS. These efforts are highlighted by: (1) a 2004 Long Range Planning Effort, and (2) a 2006 Master Plan for ARS, both of which were principally designed to identify infrastructure condition and programmatic emphases, with the outcome of generating a plan to renovate, improve, and upgrade ARS facilities state-wide. Below are brief reviews of the outcomes of these two reports:

#### 2004. Long Range Planning Committee Report. CALS Agricultural Research Stations.

In December, 2004, an appointed ARS, Long Range Planning Committee provided a summary document describing the programmatic needs of the CALS network of agricultural research stations. The document was intended to assist a subsequent committee (see below Master Plan for ARS) in the preparation of a proposal to fund a comprehensive program of ARS capital improvements. Specifically, the Committee was charged to: 1) provide a general assessment of the future programmatic need for and role of the CALS ARS, 2) provide a critical assessment of each of the existing facilities; and 3) recommend priorities for investment into facilities in the event of

declining/expanding resources. Following is the location where the full report can be found:

[http://wisbuild.doa.state.wi.us/Dfd\\_img/project\\_attachments/05F2H\\_Strat\\_Plan\\_Final\\_Report.pdf](http://wisbuild.doa.state.wi.us/Dfd_img/project_attachments/05F2H_Strat_Plan_Final_Report.pdf)

Specific recommendations of this committee included the following provisions:

- CALS ARS play an indispensable role in supporting the research mission of the College, and in many instances have a large role in the extension and instructional missions. ARS program emphasis should be proportional to faculty interests and initiatives.
- Funding to support the ARS network as it now exists will be problematic if additional base budget reductions occur. In the event of declining resources, decisions will need to be made to either reduce the level of research support provided and/or the number of stations, or require users to help fund the ARS enterprise through their gifts and grants.
- Faculty research interests will determine the future research direction of the College and will dictate the nature of support expected from the ARS.
- Availability of quality greenhouse space is a critical need for the plant sciences.

#### 2006. University of Wisconsin – CALS. Master Plan for Agricultural Research Stations.

In 2006, the ARS facilities were evaluated as an integrated set of agricultural laboratories for the CALS by an outside contracting firm. At that time, it was recognized that each location had a unique mission that included specific research and outreach emphases, and represented a particular set of environmental conditions reflective of the unique region in the state. The report can be found at: [http://wisbuild.doa.state.wi.us/Dfd\\_img/project\\_attachments/05F2H\\_Program.pdf](http://wisbuild.doa.state.wi.us/Dfd_img/project_attachments/05F2H_Program.pdf)

One of the principal outcomes of this report recognized that many of the ARS facilities have had relatively little investment in the last 30 years and are in need of repair, replacement, or modernization. Specifically, several of the stations outside of the Madison campus area date back to the early 1900's, many of which were established and initially expanded upon by with land grants and gifts from local government, private individuals, or agriculture groups. Recognizing the need to take a thorough and comprehensive approach to this needed re-investment, CALS funded this Master Plan which was completed in June 2006. This plan directly recommended approximately \$51 million (in 2006 dollars) of improvements. Importantly, the need for facility improvements at the ARS was regarded as critical for the ability to complete the stated mission of the CALS. Some improvements have

taken place since the completion of this report, and these included the modernization of headquarter buildings, machinery and chemical storage, machine shop and animal facilities, and feed handling and storage.

Summary. In the previous reports, as in the current exercise, it has been well recognized that the demographic makeup and the agricultural landscape in Wisconsin has changed considerably in the last 25 years, and agriculture in the State will certainly continue to evolve. Although the urban population exceeds the rural population, farmers and others engaged in agriculture have a significant impact on the State's economy (USDA NASS, 2013; Mitchell and Keene 2010). Common issues to the urban and rural populations alike were closely aligned with the grand challenges identified in the recent 2013, CALS Strategic Planning process (<http://www.cals.wisc.edu/departments/office-of-dean-and-director-2/cals-strategic-planning/>). In turn, the research endeavors of CALS faculty and thus the CALS has, and will continue, to undergo change to adapt to new agricultural and urban realities. For ARS to remain effective and relevant to the citizens of Wisconsin, the nation and the globe, it must strive to provide state-of-the-art research facilities to serve the traditional clientele of CALS while evolving to serve nontraditional and emerging clientele. Defining these needs in the context of diminishing resources will require an ongoing coordinated effort between ARS, the CALS and the departments and faculty users of these facilities.

*Project Signature Activities, Outcomes and Deliverables:*

In 2012, Dean Kate VandenBosch undertook the development of the college's first strategic plan since 1988. To date, she has led an initiative that created a new strategic framework based on Priority Themes that were developed out of this exercise. In addition to the development of priority themes, the Strategic Planning process also created and aligned new Mission, Vision and Guiding Principles for CALS along with associated Strategies by which the CALS intends to pursue its mission, vision and priority themes in the coming years.

This committee was asked to provide specific recommendations regarding the future of CALS ARS activities, with particular emphasis to:

- Develop and refine a revised mission statement for the whole of ARS.
- Develop a set of prioritized Guiding Principles and performance metrics for future evaluation and decision making regarding the direction and activities of the ARS and how they serve the overall College mission. Importantly, these Principles were designed to be linked to the CALS strategic plan and associated Priority Themes developed during this process.

Project Timeline.

In November 2013, an all CALS meeting discussed the challenges and opportunities that confront the College, and specifically the ARS, particularly in an era of resource constraints and changing funding models. At this meeting, it was suggested that a standing committee of the ARS implement the outlined 'Strategies' that emerged from the CALS Strategic Planning process.

In early January, 2014, an ARS Standing Committee was assembled to identify the greatest strengths of the system of research stations, and which challenges are we in the best position to address. Faculty members from the CALS community came together to form an ARS Priorities and Planning committee and to address these questions and respond to the CALS administrative leadership.

In February, 2014, the Priorities and Planning committee convened at the annual ARS Winter Conference in Madison, WI to meet with ARS Superintendents and Assistant Superintendents. The meeting was facilitated by the Office of Quality and Improvement (<http://quality.wisc.edu/index.htm>) to identify signature activities, range of services, current needs, stakeholder input, capacity for future research, instruction and outreach development. Moreover, the meeting provided an opportunity for the ARS staff to discuss possible scenarios for resource allocation and revisions.

In May, 2014, the ARS Administrative team met with the Priorities and Planning committee to identify a candidate list of ARS stakeholders for future listening sessions.

In July, 2014, the Priorities and Planning committee met to draft revised (1) Mission Statement and outline Guiding Principles Outline for the form and function of the ARS.

In October, 2014, revisions of the draft Mission Statement and Guiding Principles were submitted to Dean's Administrative Team and the associated edits and revisions were subsequently reviewed by the ARS Priorities and Planning committee.

In December, 2014, the (draft) final report, Executive Summary and Project Charter of the ARS Priorities and Planning committee was submitted, with recommendations, to the CALS Dean's office.

In January, 2015, the (draft) final report, Executive Summary and Project Charter of the ARS Priorities and Planning committee were reviewed and discussed at the 2015 ARS Winter Conference and a meeting of the Academic Planning Council.

In February, 2015, the (draft) final report, Executive Summary and Project Charter of the ARS Priorities and Planning committee were reviewed and discussed at the February CALS Chairs meeting.

In March, 2015, edits to the final report, Executive Summary and Project Charter were reviewed and discussed among the CALS ARS Priorities and Planning Committee and re-submitted for review and approval by the CALS Administration.

### **Revised Agricultural Research Station's Mission Statement.**

*To provide facilities and support for CALS faculty and academic staff-led research programs and associated education and outreach programs.*

- **Research:**
  - Advance discovery in UW CALS areas of priority scholarship
  - Create and enhance economic development
  - Discovery through partnerships (UW member campuses, private partners, stakeholders)
  - Interdisciplinary approaches to problem resolution
  
- **Education:**
  - Student preparation and learning enhancement
  - Science literacy
  
- **Outreach / Extension**
  - Outreach and stakeholder engagement
  - Results demonstration and integration into land use management and stewardship
  - Results and discovery translation

**Guiding Principles for the University of Wisconsin, CALS ARS.** Associated ranking and supplementary information provided for each Guiding Principle.

*Principal Goal:* To develop principles and guidelines, consistent with the CALS Strategic Plan, for robust decision-making regarding form and function of CALS Agricultural Research Stations. **Note:** These guidelines are provided in priority order (highest to lowest) to facilitate management of activities at ARS, and are expected to be implemented in the context of the broader CALS mission.

These guidelines should provide a decision-making framework for:

- (1) Resource cuts/scarcity and supplementation
- (2) Direct investment (e.g., receipt of private gifts, new public funding)



| Priority | Guiding Principles of the Agricultural Research Stations are to...   |
|----------|--|
| 1        | <p><i>Support faculty and staff-led, individual and interdisciplinary research activities that encompass the mission of UW CALS.</i></p> <ul style="list-style-type: none"> <li>• Build on the traditional competencies while investing in emerging areas of excellence. Programs of focus can include individual researchers as well as interdisciplinary research groups aligned with the CALS Priority Themes.</li> <li>• Assist in the translation of agricultural research discoveries into technologies, products, and services that enhance economic development.</li> </ul>  |
| 2        | <p><i>Maintain a unique and stable portfolio of research and associated education, outreach and support activities.</i></p> <ul style="list-style-type: none"> <li>• Activities addressing emerging issues are encouraged.</li> <li>• Identifiable strategic advantages of particular Agricultural Research Stations that are place-based should be encouraged and emphasized.</li> </ul>  |
| 3        | <p><i>Foster research-driven collaborations with CALS Departments, University of Wisconsin System campuses (e.g. UWEX), USDA-ARS, public and private universities, state agencies, nongovernmental organizations, and private sector entities.</i></p> <ul style="list-style-type: none"> <li>• Strategies and actions relevant to UWEX could be enhanced greatly through more direct program participation with ARS and support delivered to the University of Wisconsin, CALS; and both UWEX and CALS should take a more holistic approach in addressing the strategies outlined in both organizations in partnership with the Wisconsin Agricultural Experiment Stations.</li> <li>• Establish inter-institutional and inter-disciplinary agreements to encourage inter- and intra-state research, education, and outreach collaborations.</li> <li>• UW CALS should remain as the principal or key stakeholder with any new relationship.</li> </ul> |
| 4        | <p><i>Act as regional ambassadors to promote public engagement through instruction and outreach to the local and regional community.</i></p> <ul style="list-style-type: none"> <li>• ARS plays a critical role in the Wisconsin Idea by improving people's lives beyond the classroom, extending UW-Madison's teaching, research, outreach and public service.</li> <li>• Build and strengthen public engagement promoting CALS and the UW across the state.</li> </ul>   |
| 5        | <p><i>Seek greater effectiveness and efficiency in administrative services.</i></p> <ul style="list-style-type: none"> <li>• Develop and implement administrative hub(s) for ARS within selected regions to maximize effectiveness and efficiency of administrative services.</li> <li>• Implement cost recovery programs from contract and sponsored research which utilize the resources</li> </ul>  |

| Priority | Guiding Principles of the Agricultural Research Stations are to...   |
|----------|--|
|          | and facilities at the Agricultural Research Stations. Some portion of IDC returns could be allocated to respective ARS.  |
| 6        | <p><i>Create revenue streams to support the mission and activities that align with the stations' portfolio of current projects.</i></p> <ul style="list-style-type: none"> <li>• Decisions regarding revenue-generating activities must be consistent with the ARS mission and guiding principles.</li> <li>• Decisions regarding all contract research must be: (1) faculty-led or endorsed, and (2) aligned with ARS and CALS mission.</li> <li>• These activities must not be detrimental to, or conflict with, faculty or staff-led research; research funding, other projects, land use or staff time.</li> <li>• Actual costs, including overhead, and market factors should be considered when setting prices for goods and services (e.g. generation of charge-back fee structure).</li> </ul> |

*Future Directions:*

Performance Metrics. The committee compiled a draft set of performance metrics to describe the value of ARS to research, instruction, outreach, and extension with data. Although each station does collect some data to demonstrate its contribution and impact to research, instruction and outreach, the summative data and information for the broader community of ARS is neither stored nor accessible in a central location. An ARS sub-committee has since been formed and charged with the task of compiling a list of performance metrics that can easily be collected and reported in a year-end Annual Report format.

Stakeholder Engagement. ARS can enhance their contributions to research, education, and outreach through linkages with partnering organizations that have shared interests. The P&P committee provided a draft list of associated partners and stakeholders for future engagement efforts.

*Acknowledgments:*

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and Julie Scharm, CALS Development Specialist, Kara Luedtke, Associate Administration Program Specialist, Michell Sass, the Office of Quality Improvement Consultants Nancy Thayer-Hart and George Watson, and the Superintendents and Staff of the twelve Agricultural Research Stations around the State of Wisconsin for giving us guidance through this assignment.

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