

JAMES C. HAGEMAN
SUSTAINABLE AGRICULTURE
RESEARCH AND EXTENSION CENTER

SAREC



STRATEGIC PLAN

2012

January 2012

Dr. Bret Hess
Director
Wyoming Agricultural Experiment Station
University of Wyoming

Dear Dr. Hess,

This revised Strategic Plan for the James C. Hageman Sustainable Research and Extension Center (SAREC), is submitted in response to your charge of May 14, 2010, to develop a blueprint to help SAREC fulfill its mission to “...serve the citizens of Wyoming, the region and nation by facilitating innovative discovery, dissemination, and engagement of integrated agricultural systems that are ecologically sound, economically viable, and socially acceptable.”

We view this plan as a living document, and as such foresee ongoing revisions as SAREC seeks to fulfill its mission in a manner that is sensitive to the needs of its stakeholders.

Sincerely,

The Review Committee

Kelli Chichester, Albany County Extension
Roger Coupal, Agricultural and Applied Economics, UW
Larry Cundall, Producer, Glendo
Jim Freeburn, James C. Hageman SAREC
Jim Krall, Plant Sciences, UW
Gary Moss, Animal Science, UW
Ron Pulley, Producer, Huntley
John Tanaka, Ecosystem Science and Management, UW

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I. INTRODUCTION

The University of Wyoming College of Agriculture and Natural Resources is dedicated to the land-grant philosophy of research-based information as a basis for assisting education, outreach, and economic development in Wyoming. The mission of the College “is to be a proactive leader in education and scholarship in support of healthy, sustainable systems for Wyoming’s agriculture, environment, natural resources, rural communities, and extensions/outreach service”.¹

The Agricultural Experiment Station (AES) and its associated Research and Extension (R&E) Centers are integral to the mission of the college. The R&E centers provide the means to conduct research that *discovers, generates, and synthesizes* new knowledge and its application to meet Wyoming’s emerging technological, scientific, and social needs. SAREC’s purpose is to facilitate research and education on sustainable agricultural systems.

The term “sustainability” evokes varied images that are colored by background, training, and unique interests of individuals. By sustainability, we mean **“agriculture practices that remain viable in perpetuity”**. Sustainability infers the maintenance, and preferably enhancement, of resources that serve as a foundation for the production and management of renewable resources (e.g. native or planted vegetation on rangeland, forages, crops, and livestock) in a manner that is profitable and socially acceptable.

II. MISSION STATEMENT

“SAREC will serve the citizens of Wyoming, the region and nation by facilitating innovative discovery, dissemination, and engagement of integrated agricultural systems that are ecologically sound, economically viable, and socially acceptable.”

III. STRATEGIC PLAN

1. Strategic Goals

SAREC will serve the citizens of Wyoming, the region and nation by facilitating:

- A. *Discovery*: SAREC will facilitate mission-linked scientific inquiry on agricultural systems that promote sustainable land and resource use.
- B. *Dissemination*: SAREC will disseminate knowledge developed through discovery to enhance the sustainability of agriculture systems for the future.
- C. *Engagement*: SAREC will facilitate dialogue among stakeholders with diverse roles and backgrounds to advance understanding and implementation of sustainable agriculture practices.

¹ From College of Agriculture Academic Plan, 2004-2009, www.uwyo.edu/uwag/academic%20plans/index.html.

2. Tactical Objectives

The three Strategic Goals for SAREC will be realized through the completion of the following Tactical Objectives.

Strategic Goal 1: Discovery

SAREC will facilitate mission-linked scientific inquiry on agricultural systems that promote sustainable land and resource use.

- A. Conduct applied and exploratory research on principal components of sustainable agriculture systems and ecosystem management. For this objective, SAREC will:
 - a. Collect “baseline data” required to evaluate changes in SAREC’s natural resource base.
 - b. Evaluate and document effects of agriculture production systems on condition and integrity of SAREC’s natural resource base.
 - c. Identify alternative agricultural systems and evaluate their potential to improve productivity, diversification, and sustainability relative to conventional approaches to agriculture.
- B. Cultivate scholarship through learning processes that enhance knowledge, skills, and attitudes to make inferences, deductions, and decisions about sustainable agriculture systems. For this objective, SAREC will:
 - a. Provide opportunity for quality experiential learning through “hands-on” access to agriculture practices that contribute to the sustainability of agriculture.
 - b. Synthesize, combine, and interpret results and impacts of long-term ecological monitoring, experimental research, and demonstration studies to better evaluate impacts of innovations in agriculture and their contribution to sustainability.
 - c. Encourage collaborative educational opportunities between University Faculty, SAREC, regional colleges and Universities, and industry.
- C. Systematically analyze SAREC activities and their impacts to promote synthesis of knowledge. For this objective SAREC will:
 - a. Conduct meta-data analyses to identify elements, relationships, and underlying principles that govern complex aspects of agricultural systems and resources.
 - b. Document progress on quantifiable goals for SAREC annually.
 - c. Identify and document quantifiable benchmarks for assessing risks to the sustainability of agriculture in the region.
- D. Responsibilities:
 - a. The SAREC Research Leader will have primary responsibility for coordinating the implementation of these tactical objectives.

- b. Each center scientist shall seek opportunities within this objective to further the mission of SAREC.
- c. Research directed by off-location scientists shall fit within this strategic goal and tactical objectives.

Strategic Goal 2: Dissemination

SAREC will disseminate knowledge developed through discovery and dialogue processes that serve to enhance the sustainability of agriculture systems for the future.

- A. Provide for learning about agriculture stewardship and resource management through experiential programs that link discovery with dissemination.
For this objective SAREC will:
 - a. Provide experiential learning through on-site short courses, seminars, tours, demonstrations, and field days.
 - b. Provide access in a variety of formats (electronic, hard copy, literature) to data, outcomes, and meta-data derived from discovery at SAREC including economic, social, and ecological viability and impacts.
- B. Develop and maintain a user-friendly, web-based information sharing system for dissemination of research and dialogue. The website should include a virtual tour plus scientific and lay publications based on results obtained at SAREC and elsewhere.
- C. Responsibilities:
 - a. All personnel located at SAREC shall be responsible for this strategic goal.
 - b. A staff member, CES web designer, or an outside contractor shall be given the responsibility of developing the web-based information sharing system.

Strategic Goal 3: Engagement

SAREC will facilitate dialogue among stakeholders with diverse roles and backgrounds to advance understanding and implementation of sustainable agriculture practices.

- A. Serve as a site where dialogue on resource management and techniques for ecologically sound, economically viable, and socially acceptable methods of operating can occur. Dialogue of this nature may include:
 - a. Outreach efforts to elicit input from interested parties on resource issues important to Wyoming.
 - b. Mediation of opposing interests in regional agricultural resource management concerns.
 - c. In conjunction with stakeholders, design and conduct studies and/or evaluate data to identify impacts of controversial agriculture practices.

- d. Establish working groups of researchers and producers to conduct research designed to evaluate the incorporation of new technologies into practical management.
- B. Responsibilities:
 - a. The SAREC Research Leader is responsible for the overall implementation of this strategic goal.
 - b. Faculty members stationed at SAREC are charged with incorporating these activities into their research and extension programs.

IV. PRIORITIES

1. Facilities Priority

Facilities essential for SAREC to be a productive resource used by scientists include:

- A. Long-term housing for interns, visiting faculty, and livestock attendants.
- B. On-site communications capabilities to allow local groups and individuals to engage others in two-way audio/video conferencing.
- C. Maintain periodic technology updates for high-speed internet access to the UW server and library system.
- D. Maintain “state of the art” weather station capabilities, with remote access to monitor and record ambient temperature, precipitation and soil moisture.

2. Project Priority

Projects shall be reviewed annually and prioritized by the Director of Operations at SAREC based on the mission and goals of SAREC plus the availability of resources and personnel. Rates for research are listed on the website or as negotiated with the Director of the Experiment Station for producer-driven and junior faculty research.

3. Baseline Systems

Baseline systems shall be maintained to provide long-term data necessary to evaluate impacts of innovations in systems research. Baseline systems will consist of:

- Dryland Cropping System (wheat/fallow)
- Irrigated Cropping System (corn/alfalfa)
- Cow/Calf System (30 cows; dryland native pasture in summer, crop residue in fall, supplemental hay in winter)
- Sheep System (30 western white-faced ewes, base resource similar to cows).

V. STRUCTURE

1. Administrative Advisory Committee (AAC)

An Administrative Advisory Committee will be formed to communicate issues faced by Wyoming agriculture to SAREC administration and assist with dissemination of innovations to Wyoming agriculture.

A. Committee Structure

- a. The seven-member committee will be composed of:
 - Three UW faculty members with research expertise in Plant Science, Animal Science, Agricultural Economics, or Ecosystem Science and Management, and an appreciation for “systems-based” research.
 - One county-based Extension Educator.
 - The past-Chair, Chair, and Chair-elect of the James C. Hageman SAREC Citizens’ Focus Group (CFG).
- b. Ex officio, non-voting members of the committee shall include; Directors of the Wyoming Agricultural Experiment Station, UW Extension, SAREC, and the SAREC Research Leader.
- c. Committee terms will be three year staggered terms with two or three members retiring on December 31 each year.
- d. The Chair of the Administrative Advisory Committee shall be the Chair of the James C. Hageman SAREC Citizens’ Focus Group (CFG).
- e. In consultation with the Chair, the SAREC Research Leader shall be responsible for meeting preparations including scheduling, selecting a meeting site, and developing the agenda. The Research Leader will serve as secretary and ensure minutes of the meetings are posted *in a timely manner*.

B. Committee Function: The role of the Administrative Advisory Committee is to facilitate independent thought and dialogue necessary to achieve the Center’s goals. The AAC complements the CFG by providing a mechanism to facilitate dialogue between the citizens of Wyoming and SAREC. Specifically, the Committee will:

- a. Serve in an advisory capacity for the overall functions of SAREC.
- b. Regularly review and adapt short- and long-term goals for SAREC programs in accordance with the stated mission.
- c. Provide direction and advice about how to best use limited resources.
- d. Establish systems and standards.
- e. Develop guidelines to assess how proposed research fits with the mission of the station.
- f. Assist with public relations on behalf of SAREC by meeting with constituent groups and helping with distribution of information.

- g. Develop a “handbook” of bylaws and actions of the committee to ensure continuity of procedures and practices.
- h. Promote the timely placement of information on the website.
- i. Review the collection of appropriate baseline information so that the vitality of SAREC’s resource base can be evaluated.
- j. Provide recommendations on routine agriculture and resource management practices.
- k. Encourage presentation of annual reports of research conducted at SAREC.
- l. Help relay the impacts of specific research projects to scientific, producer, and lay audiences by gaining an understanding of the application and relevance of specific research projects to sustainable agricultural practices.
- m. Explore and develop new methods to fund SAREC programs including funds for matching grants, scholarships, and internships.
- n. Assist the research leader with the development of producer-participatory activities to facilitate transfer of new innovations to agriculture.
- o. Actively interface with the James C. Hageman SAREC Citizens’ Focus Group (CFG). By-laws for the CFG (attached) are part of this Strategic Plan.

2. External Advisory Committee

The James C. Hageman SAREC Citizens’ Focus Group (CFG) shall be maintained to seek stakeholder input and communicate accomplishments and needs of SAREC to the public. By-laws of the CFG (attached) are part of this strategic plan.

3. Guidelines for Staffing

Individuals located at SAREC should include a Research Leader, Director of Operations, administrative staff, an Operations Manager, research support staff, interns and graduate students. Additional faculty and academic professionals may be located at SAREC depending on their job assignments and professional qualifications.

A. Faculty

- a. *Research Leader*: The Research Leader should possess an understanding of sustainable agriculture practices and systems research which is crucial to the mission of SAREC. This individual shall be responsible for oversight and implementation of research at SAREC and the holistic evaluation of the effects of projects on sustainable agriculture production. The research leader shall oversee the collection and evaluation of baseline data required for evaluating ecological impacts of production practices, synthesizing results of specific trials to evaluate their impacts on sustainable agriculture production, and relaying results to the scientific community and the public. Duties inherent to the position include: developing system-based research initiatives, forming research teams, and procuring extramural funding crucial to fulfilling the mission of SAREC. A portion

of the Research Leader's appointment should be in extension education, and participation of the Profitable and Sustainable Agricultural Systems (PSAS) and Sustainable Management of Rangeland Resources (SMRR) Initiative Teams should be solicited for SAREC activities. The Administrative Advisory Committee will assist the Research Leader in developing producer-participatory activities to facilitate the transfer of new information to the industry and enhance the engagement of producers with SAREC.

- b. *Director of Operations*: This individual shall represent the station to the public, be responsible for routine management of the station, and shall assign station personnel to duties. In addition to fiscal budgeting responsibilities, the Director of Operations shall work with the Research Leader to fulfill the mission of SAREC. This may include coordination of off-station research projects.
- c. *Other faculty and academic professionals*: Faculty in numerous disciplines are essential to the mission of SAREC. These individuals may, or may not be stationed at SAREC depending on their job descriptions and responsibilities in their home department in the College of Agriculture and Natural Resources or other UW Colleges. To facilitate faculty participation in SAREC and to meet the mission of SAREC, it is recommended that individual faculty job descriptions reflect appropriate time commitments to SAREC activities. For SAREC to fulfill its mission, faculty as a whole should possess a common appreciation of sustainable agriculture and expertise in at least the following areas:
 - Agriculture Economics
 - Animal Science
 - Communication Technology
 - Crop Science
 - Entomology
 - Plant Pathology
 - Range and Natural Resources
 - Rural Sociology
 - Soil Science
 - Water Quality and Quantity
 - Weed Science

As a whole, "*Other faculty and academic professionals*" will be responsible for the **Discovery** of new aspects of agriculture systems that influence sustainability of agriculture and rural vitality. In addition, they will disseminate research results to scientific audiences and collaborate with SAREC's Research Leader to ensure **Dissemination** to, and **Engagement** of, the industry with SAREC. Examples of expected activities include: the development of producer-participatory activities to evaluate the adoption of research results, provide training to county based

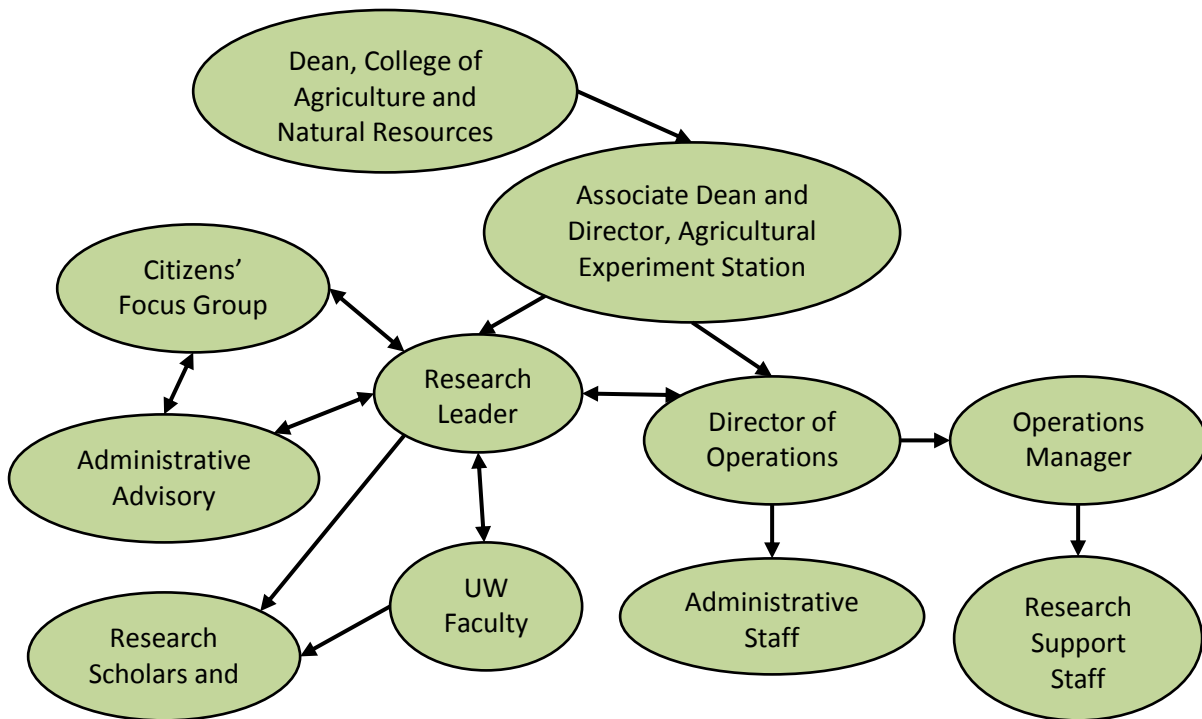
educators, preparation of extension bulletins and guides, and evaluation of the economic and societal impacts of new innovations and recommendations.

B. Staff

- a. *Operations Manager*: Duties for this individual shall encompass conducting routine experimental chores, maintenance of facilities, and directing daily activities of research support personnel.
- b. *Administrative Staff*: In addition to routine activities, staff support is required to assist with Web design and periodic updates, record keeping, fundraising, dissemination of results in the forms of news releases and brochures, and public relations.
- c. *Research Support Personnel*: Conduct activities associated with center functions and maintenance and provide research support for new and ongoing projects.
- d. *Interns*: Internship opportunities need to be developed for students seeking agricultural experiences. Specific duties for these interns shall be dictated by seasonal station needs including: ongoing research, baseline data collection, outreach activities, dialogue projects, and student interests.

- C. Funding for Support Staff: To maintain base level support, the above positions should be funded by monies appropriated to the U.W. Agricultural Experiment Station. However, funded projects should budget monies to purchase release time for the research associates and staff. These funds should be available to SAREC for alternate needs or hiring additional staff.

D. Administrative Structure: The flow diagram below illustrates the recommended administrative structure for SAREC. The Dean of the College of Agriculture and Natural Resources is the University official ultimately responsible for SAREC. The Administrative Advisory Committee shall serve in an advisory capacity for SAREC (as outlined in this document) and shall serve as a conduit for dialogue between the CFG and the Research Leader at SAREC. The Director of AES, Director of Operations at SAREC and the Research Leader shall coordinate all short and long range activities at SAREC with appropriate assistance from station personnel.



VI. PROCESS

1. Incentives for Faculty to use SAREC

- A. Provide facilities and resources that complement those provided on campus.
- B. Secure and identify a source of funding for new investigators at SAREC to conduct pilot-studies necessary to enhance their competitiveness for larger extramural funding opportunities.
- C. Provide a site for short-term housing of students and faculty while conducting research trials at SAREC.
- D. Allot a proportion of AES Competitive Grant funds to research and education projects to be conducted at SAREC.
- E. Provide the opportunity and funding for student interns to work on research and education projects.
- F. Establish a scholarship program for experiential learning projects at SAREC.
- G. Establish a mechanism for matching externally derived funds for necessary infrastructure needs for research projects.
- H. Enhance endowment funds for intern and graduate student support.
- I. Capture SAREC-generated revenues for facility development, project support, and student stipends.
- J. Encourage UW College of Agriculture and Natural Resources Administration to include assignments at SAREC as part of new employees job description and reward such activities appropriately.
- K. Allot a portion of SAREC resources (land and facilities) to producer driven research or demonstration.
- L. Assist faculty in identifying producer resources available for applied research projects.

2. Procedures for Project Consideration

The Administrative Advisory Committee shall annually review all projects and provide guidance about how to best fulfill the Center's Goals of Discovery, Dissemination, and Engagement. The process by which a proposal will be considered for conduct at SAREC shall generally proceed as follows:

- A. Written proposals for projects shall be submitted to the Research Leader for consideration throughout the calendar year.
- B. The Research Leader shall coordinate activities with the Director of Operations to ensure the availability of resources.
- C. The Agricultural Experiment Station Director shall distribute green-sheeted projects that have potential to be conducted at SAREC.

- D. Approved projects shall be submitted to the funding agency with SAREC support indicated.
- E. Updates or summaries of new, continuing, and ending projects shall be presented annually by the Principal Investigator (PI) to the James C. Hageman SAREC Citizens' Focus Group.

3. External Funding

Consultation with the Agricultural Experiment Station Director, the SAREC Research Leader and the Director of Operations at SAREC from the inception to submission of grant proposals is strongly encouraged for any project proposed which would require significant resources. The Administrative Advisory Committee shall review, evaluate, and provide recommendation on projects to be conducted at SAREC. Priority shall be given to projects that:

- A. Budget funds to support SAREC personnel.
- B. Provide funding to improve infrastructure at SAREC.
- C. Provide stipends for students to work on research and education projects located at SAREC.

VII. ATTACHMENTS

- 1. By-laws of the CFG**
- 2. Actions and Recommendations of the CFG**
- 3. Minutes of the CFG**
- 4. Actions and Recommendations of the AAC**
- 5. Minutes of the AAC**