

**COLUMBIA BASIN AGRICULTURAL
RESEARCH CENTER (CBARC)**

STRATEGIC PLAN 2024 - 2031



Oregon State
University

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INTRODUCTION TO THE COLUMBIA BASIN AGRICULTURAL RESEARCH CENTER

Oregon is a state with amazing and diverse natural resources facing energy, ecological, extraction, production and management problems and opportunities. It is within the context of these historic national, state, and OSU priorities that OSU Branch Experiment Stations conduct research and extension activities.

The Morrill Act established the national land grant university system in 1862, and Oregon State University (then called Oregon Agricultural College) was designated as the land grant university for Oregon six years later.

In 1887, the Hatch Act established agricultural experiment stations, in connection with colleges in several states, to strengthen agricultural and natural resource research relevant to the needs of the diverse regions of states and to promote technological innovation. The Smith Lever Act of 1914 established a system of cooperative extension services connected to these land-grant universities to inform the public about ongoing developments in agriculture, home economics, public policy/government, leadership, 4-H, economic development, and coastal issues.

STATION HISTORY

At present, CBARC is one of 13 Oregon Agricultural Experiment Stations evaluating food and fiber production, processing and marketing, stewardship of natural resources, human and animal nutrition, commercial fishing, and other topics important to the environmental, economic, and social well-being of Oregon's diverse regions.

The production of cereal grains is fundamental to the economy of the inland Pacific Northwest states. Producers harvest more than 4.2 million acres of wheat, valued at several billion dollars per year. However, climate, soils, and topography vary markedly within the region. Thus it is essential for producers to adjust their management to the conditions particular to their farms and fields so they can grow dryland crops in a way that meets the challenges of their particular environment. CBARC's two locations bracket the most common growing conditions for dryland wheat in eastern Oregon, from the drier (Moro) to the wetter (Pendleton) climates and soils encountered by most growers.

The two locations have a rich and distinctive history. The branch experiment stations at Moro (Sherman Station, established in 1909) and Pendleton (established near Adams in 1928) were created to carry out research that could support the livelihoods of dryland farmers. In 1973, the stations were reorganized under the name Columbia Basin Agricultural Research Center (CBARC). Federal researchers have played a very important role as collaborators with university faculty since early in the history of the Pendleton and Sherman Stations. In 1970, the federal side of the Pendleton station became organized as the Columbia Plateau Conservation Research Center, a unit of the USDA-Agricultural Research Service. Thus, university and federal scientists at the research Center have been addressing the needs of dryland agriculture in the Inland Pacific Northwest for more than 100 years.

LAND ACKNOWLEDGEMENT AND RECOGNITION OF NATIVE LANDS

The OSU-Columbia Basin Agricultural Research Center (CBARC) near Pendleton, OR is located within and adjacent to the lands inhabited by people of the Umatilla, Walla Walla and Cayuse tribes. These tribes prospered with plentiful native plants, wild game and fish. The tribes were displaced during Euroamerican colonization and war during the 1850's. Survivors were forcibly relocated by the US government to reservations. Today, The Confederated Tribes of the Umatilla Indian Reservation are the recognized confederation of the three tribes: the Cayuse, Umatilla, and Walla Walla.

CURRENT CBARC DESCRIPTION: HOW WE WORK

We serve the dryland wheat growers of the Pacific Northwest, and our research is providing invaluable data resources to inform grower decisions about how to grow wheat profitably while ensuring environmental quality and soil health. Scientists at CBARC specialize in research and extension work important to the production of wheat and rotational crops on 2 million acres in north-central and northeastern Oregon which generate more than \$300 million annually.

The Pendleton Station is located on 160 acres of land. The station is equipped with modern laboratories specializing in plant pathology, crop physiology, cereal variety testing; soil chemistry, physics, and microbiology; weed science; hydrology; and agronomy. Facilities include several laboratories, greenhouses, soil and plant processing and analytical equipment, offices and meeting room, machine shop, and housing for visitors.

The Sherman Station is located on 230 acres of land near Moro and serves the field research needs of scientists from the OSU campus in Corvallis and the Pendleton Station. The onsite staff has a shop, office, weather station, and a full complement of farm equipment. Current research involves: variety development; soil fertility practices for cereals as well as legumes, canola, mustard and other crops; weed management; disease management; and use of soil conservation practices including direct seeding.

Currently, CBARC Faculty members are appointed to Oregon State University departments of Crop and Soil Science, and Botany and Plant Pathology, both within the College of Agricultural Sciences. Our expertise is supplemented with the co-located USDA scientists, which specialize on plant physiology, hydrology, soil science, microbiology, and agronomy, among other fields.

PREVIOUS PLANNING EFFORTS

Faculty and staff met in October of 2018 with a facilitator at a planning retreat to review financial information and grant funding trends. Participants identified organizational strengths as well as areas for operational improvements. They also participated in the identification of opportunities, and envisioned what success would look like. The session identified several areas for improvement including:

- ▶ Need for more outreach and engagement
- ▶ Improvement of internal communications
- ▶ More emphasis on the improvement of inclusion and diversity
- ▶ Staffing and hiring issues
- ▶ Need for an experiment advisory committee
- ▶ Need for more visibility for the Center
- ▶ Establishment of annual planning retreats
- ▶ More focus on funding for sustainability, resilient farming and climate change, and creating a new center for soil carbon research

In November of 2019, faculty and staff met to identify priority action items in operations, facilities, research, and personnel. Participants also reviewed the programs and activities that were going well for the unit and they identified areas for improvement including:

- ▶ Updated or new Operational Procedures
- ▶ Better coordination of research and dialogue between the scientists
- ▶ More stable leadership, and need for a full time Director

Since these meetings, several of the problems and issues identified at the retreat have been addressed. However, a few areas continue to require additional work and provide a starting point for this strategic planning process:

- ▶ Need for updated facilities and equipment
- ▶ Need for periodic planning retreats
- ▶ Improved outreach
- ▶ Availability of housing for visitors, and students

STRATEGIC PLANNING PROCESS

While we are proud of CBARC's rich history of research, instruction, and extension – it is essential to plot the future of our programs to continue serving the needs of Oregon's stakeholders. New technology, production constraints, climate change, and other issues make it more important than ever to be deliberate about our future. CBARC initiated a planning process to develop a seven-year strategic plan that will guide the Station's adapta-

tion, development, and future operations in a rapidly changing physical, social, and economic environment. The changing conditions for farmers and land managers in Columbia Basin creates a new level of urgency to identify stakeholder needs and to form effective responses to dryland grain grower issues and also pinpoint opportunities.

The purpose of the strategic planning process is to create a simple guiding document for the Station to move faculty, staff, stakeholders and local leaders through a community engagement process that engenders support and advice. This strategic plan integrates and aligns University, College, and relevant University department plans toward a common end. The final product is this written report that can be used to guide the development of CBARC's operational and programmatic plans and to recruit new partners to achieve the strategic objectives.

The Strategic Planning Committee consisted of:

Participant	Affiliation	Title
Judit Barroso	CBARC	Weed Scientist
Sam Agyin Birikorang	USDA-ARS	Research Leader
Francisco Calderon	CBARC	Director
Ryan Graebner	CBARC	Cereal Variety trials
Christina Hagerty	CBARC	Plant Pathologist
Jeffrey Hale		Planning Facilitator
Kyle Harrison	CBARC	Center Operations Coordinator
Amanda Hoey	Oregon Wheat Commission and Oregon Wheat League	Chief Executive Officer
Stephen Machado	CBARC	Agronomist
Ben Maney	Oregon Wheat Growers League	Ex-president
Ernie Moore	Sherman Station Liaison Committee	Chairman
Debbie Sutor	CBARC	Office Manager
Chris Williams	Pendleton Station Liaison Committee	Chairman

The following community representatives, faculty and staff participated in three community meetings and numerous outreach efforts to engage various key constituencies in the area served by the Station.

This Strategic Planning process sought to establish new activities and directions and validate the need to retain current activities through the involvement of collaborators, growers, faculty, and staff. Besides the in-person participants at the strategic planning meetings, a survey about proposed goals and objectives was distributed to additional key stakeholders. The CBARC director reviewed the survey results to gain insights and validate the strategic goals and objectives.

The process provided a meaningful learning experience for the participants and created opportunities to explore programmatic partnerships and collaborations. Participants increased their sense of being a part of a team and gained understanding of the direction of the Unit and their role in getting to the destination.

The CBARC Strategic Planning committee met for the first time on February 27, 2023. Participants were given an overview of the planning process. The CARE document (<https://agsci.oregonstate.edu/sites/agscid7/files/main/for-faculty/care.pdf>) was reviewed to provide participants with a structure for conducting the meeting and working with each other. Jeff Hale, strategic planning consultant, lead the group through a SWOT (strengths, weaknesses, opportunities and threats) organizational analysis. Members also reviewed strategic directions from previous organizational planning retreats.

On April 10, 2023, the committee reconvened to review the first draft of the mission statement, vision statement, organizational description, and goals and objectives. Teams worked to revise, edit, and reorganize the draft material. Subsequently, the facilitator and director refined the core of the strategic plan and added relevant details for a first draft for the committee to review.

On May 31st, 2023, the participants met to review the strategic plan's first draft and suggest final changes to the identified strategic objectives. The participants also discussed additional forms of community input. They also clarified goals and objectives and discussed barriers and the steps necessary to operationalize the plan. Upon final review by the committee, community responses, made available for comment, and additional refinement, the plan was finalized on September, 2023.

The strategic planning process ensures alignment with and advancement of the interests and goals of the College of Agricultural Sciences. CBARC's stated goals and objectives are achieved by creating measurable operational objectives drawn from these strategic objectives. These specific operational objectives are linked to the action plans of faculty and staff members. Each person will be given various responsibilities, actions, and objectives over an extended timeline. These deliverables are met by adjustments and alignments to employee workloads and opportune moments within the community. They are constantly informed by strategic objectives and guiding values. Evaluation of work activities and outcomes will be a regular part of plan assessment and employee review.

STRATEGIC PLANNING FRAMEWORK

Strategic planning is a product and a process. The process occurs within a strategic framework, during a specific time and place. It also occurs within a context of institutional values and personal commitment. CBARC operates within the broader context of Oregon State University, the College of Agricultural Sciences, and the state's network of Branch Experiment Stations.

Oregon State University Mission

As a land grant institution committed to teaching, research, and outreach and engagement, Oregon State University promotes economic, social, cultural, and environmental progress for the people of Oregon, the nation, and the world. This mission is achieved by producing graduates competitive in the global economy, supporting a continuous search for new knowledge and solutions, and maintaining a rigorous focus on academic excellence, particularly in three Signature Areas:

1. Advancing the Science of Sustainable Earth Ecosystems,
2. Improving Human Health and Wellness, and
3. Promoting Economic Growth and Social Progress.

College of Agriculture Mission

Oregon is unmatched in the density of its diverse agricultural, environmental, and social landscape. As the founding college of the state's land-grant institution dedicated to serving all Oregonians, the College of Agricultural Sciences stands at the crossroads of conservation and production. We find creative solutions at the confluence of diverse perspectives. As champions of science, we embrace differences to find common ground and create opportunity — committed each day to make tomorrow better. The inherent strengths and aspirational opportunities through which we will advance that unifying purpose, include:

1. Agricultural Competitiveness and Resilience,
2. Food Innovation for Health, Markets, and Access,
3. Coastal Food Systems and Conservation, and
4. Working and Natural Landscapes.

Oregon State Extension

The direction of Oregon State Extension is expressed in its institutional vision, mission, and values.

Vision

The life of each person we engage will be demonstrably improved and enriched by access to and co-creation of innovation, knowledge, and expertise.

Mission

Outreach and engagement at Oregon State University enhance access to enrichment and problem solving through reciprocal relationships for the exchange of knowledge and resources in partnership with individuals, communities, businesses, industries, government, and educational institutions.

Values

- ▶ Learner-centered approach: We engage collaboratively with our diverse learners and stakeholders and adapt to meet their needs.
- ▶ Innovation: We embrace creativity and new methods, ideas, and products to improve our services.
- ▶ Integrity: We are responsible, ethical and accountable for our actions.
- ▶ Diversity: We embrace and advocate for diversity, equity, and inclusion.
- ▶ Knowledge: We use research-based, community-generated, and indigenous knowledge to guide our decisions, practices, and actions.
- ▶ Healthy work environment: We respect that faculty and staff are valuable resources and believe we all deserve an empowering, supportive, and caring environment.
- ▶ Social responsibility: We contribute to society's well-being and intellectual, cultural and economic progress.

Agricultural Experiment Station Mission

The Oregon Agricultural Experiment Station is the principal agricultural research agency in the state. Its mission is to conduct research in the agricultural, biological, social, and environmental sciences for Oregon's economic, social, and environmental benefit.

CBARC faculty participate nationally and throughout the state in (scientific societies, grower organizations, community groups, etc.) Faculty gain insights, network, and carry out work that contributes to the national advancement of science and agriculture. Faculty are also aware of national priorities from USDA, and the National Institute of Food and Agriculture. NIFA "provides leadership and funding for programs that advance agriculture-related sciences." The Agency invests in and supports initiatives that ensure the long-term viability of agriculture. NIFA applies an integrated approach to ensure that groundbreaking discoveries in agriculture-related sciences and technologies reach the people who can put them into practice. NIFA has the following program priorities:

- ▶ Develop new opportunities to address climate change vulnerabilities.
- ▶ Encourage stakeholders to adapt their science to climate change.
- ▶ Take an integrated systems approach to climate change programming.
- ▶ Integrate climate change into agency-wide planning processes.
- ▶ Increase interagency coordination for climate change science.
- ▶ Adapt NIFA granting procedures to climate change.
- ▶ Examine reporting mechanisms to track climate change expenditures and impacts.
- ▶ Improve NIFA's workforce flexibility to better adapt to climate change.
- ▶ Increase outreach to stakeholders about NIFA climate change activities, opportunities, and data.

OUR VALUES AND COMMITMENTS

The faculty and staff members of CBARC are committed to the following guiding values, principles, responsibilities, commitments, and practices as expressed by Oregon State University and the College of Agriculture:

As a member of the Oregon State University family, we honor these commitments expressed in SP4.0 (<https://leadership.oregonstate.edu/strategic-plan>). We will be:

- ▶ Innovators and collaborators with our students in research to drive solutions.
- ▶ The source of excellent education for all learners.

- ▶ Leaders in the delivery of education.
- ▶ Welcoming and fostering belonging and access for all.
- ▶ Visionary in our integration of the arts, humanities, sciences, and engineering.
- ▶ Accountable leaders.
- ▶ Agile and entrepreneurial.
- ▶ Mindful of this special place and all Oregonians.

Members of the College of Agricultural Science adhere to the following values articulated in the CAS CARE document (<https://agsci.oregonstate.edu/sites/agscid7/files/main/for-faculty/care.pdf>): We are responsive to the needs of those we serve.

- ▶ We are a reliable source of credible, evidence-based information and education.
- ▶ We partner with individuals, organizations, businesses, and stakeholders beyond OSU.
- ▶ We include diverse perspectives in our research, outreach, and educational efforts.
- ▶ We foster mutual respect among ourselves and the broader community.
- ▶ We are accountable for the stewardship of resources and fulfilling of our missions.

The combination of these overarching principles and values provides additional context and guidance for this strategic planning process and the strategic plan.

SITUATIONAL ANALYSIS (SWOT)

Global/National perspective –Agriculture faces global threats such as epidemics, war, fire, drought and unpredictable weather which may affect our ability to grow enough food to sustain us. These events affect agricultural land as well as the farmers, and the grain trade. On a more local level there can be damage to local agricultural land or facilities that may not be able to recover from disaster.

Agroecosystems are vulnerable to an increasingly variable and extreme climate (<https://www.nifa.usda.gov/grants/programs/climate-change-adaptation-mitigation-resilience/nifa-climate-adaptation-resilience-plan/our-vulnerabilities>). Climate change is accelerating risks from biotic stressors, including pests, weeds and pathogens, and abiotic stressors, such as soil erosion. Successful climate adaptation will require prioritized attention to multiple components of agroecosystem productivity and sustainability.

Farmers face additional problems. There are escalating costs of operations (including fluctuating commodity prices, increases in the cost of fertilizer and fuel, and increased cost of agrochemicals, all of which increase the business risks associated with farming. While rapidly changing technologies may address some of these issues, it will take years to transition to widespread adoption of practices that will increase farm viability. Farmland is disappearing at an alarming rate due to urbanization and development of energy infrastructure. Farmers are aging, and there are fewer and fewer family farms, because entry into farming requires substantial amounts of capital. Additional threats include herbicide resistant weeds, plant diseases, snake oil products, and soil acidification. The societal disconnect between people and the source of their food makes it hard to advocate for increased funding for agricultural research.

The external survey (Appendix A) and the internal SWOT analysis resulted in the identification of the following strategic planning information.

CBARC Strengths

- ▶ Research that is relevant and responsive to the needs of growers.
- ▶ The close relationship with USDA-ARS increases the locally available scientific expertise and research capacity, enabling multi-disciplinary research teams.
- ▶ Knowledgeable, dedicated, and responsive researchers working on real problems about dryland food, fuel, and fiber production, which are critical commodities.
- ▶ Long-term research land and projects that allow for the evaluation of agricultural management practices over years and decades.
- ▶ Capacity to do soil and plant analysis with cutting-edge technologies.

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- ▶ Collaboration with other federal agencies, Land Grant Universities, extension, and international entities.
 - ▶ External support and advocacy by multiple stakeholders and the College of Agricultural Sciences.
 - ▶ Innovation in advancing sustainable practices with input from local stakeholders.
 - ▶ Support and collaboration with industry partners.

CBARC Weaknesses

- ▶ Research farm, lab, and office facilities need to be expanded and and/or improved to be able to carry out essential research to address future issues in dryland agriculture.
- ▶ Limited residential housing options
- ▶ Funding uncertainties and lack of resources
- ▶ Outdated and inadequate field equipment
- ▶ Need for more grower participation and collaboration, especially the need to widen the diversity of people the center's faculty works with, to better serve underrepresented communities.
- ▶ Limited involvement with local organizations
- ▶ Insufficient research land for additional field trials
- ▶ Need to expand external communication and outreach
- ▶ Slow release of data and new varieties
- ▶ Campus regulations, restrictions, and general bureaucracy
- ▶ Need for additional effective advocacy
- ▶ Distance from main campus and insufficient on-site residential facilities make it difficult to bring students and visitors for longer-term educational and collaborative opportunities and lack of affordable local or onsite housing.
- ▶ Staffing vacancies is challenging due to uncompetitive compensation for support staff members.

CBARC Opportunities

- ▶ Continue building a strong relationship with the Oregon Wheat Growers. We are the go-to institution for questions regarding dryland agriculture in the region.
- ▶ Significant data and research to develop alternative crop systems to meet emerging markets such as carbon sequestration, biofuel, and rotational grains and legumes.
- ▶ External and internal collaborations
- ▶ Diversified external funding, including agreements that bring federally appropriated funding
- ▶ Involvement with local growers to obtain direct input and ideas, and conduct on farm research and demonstrations and outreach
- ▶ Opportunities to test new products (e.g., sensors) and remote sensing data new technology to evaluate their value to local growers

CBARC Threats

The work of CBARC is threatened by the following:

- ▶ A period of rapid change. Global threats (epidemics, drought, war, trade)
- ▶ Climate change, unpredictable droughts, fire.
- ▶ Emerging problems with ineffective herbicides, pesticides and increasing soil acidity
- ▶ Public ignorance of agricultural production. Suspicion of education and science, and political divisiveness.
- ▶ Challenges with communication with the local community affecting the visibility of what we do
- ▶ Diminished farmland and consolidation leading to a reduced stakeholder pool
- ▶ Hiring and staffing issues

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- Operational expenses affected by inflation
 - Lack of internet technology security
 - Fluctuations in funding for Extension and Research

CBARC Mission and Vision

Participants identified the elements of a strong vision and mission for the Center. Key words were then ordered, reordered, revised, and edited by committee members. Below are the vision and mission of the Columbia Basin Agricultural Research Center as determined by the Strategic Planning committee. These vision and mission statements are in accordance with the role, goals and objectives of Oregon State University and the College of Agriculture:

Vision Statement

Successful family farms and thriving local rural communities supported through innovative, profitable, fact-based and thriving dryland cropping systems which are competitive, resilient and environmentally conscious and result in affordable, healthy and nutritious food for consumers.

Mission Statement

CBARC conducts cutting edge, multi-disciplinary, economically relevant basic and applied grower driven research, and disseminates this information to the stakeholder community to improve dry cropland production systems and the natural environment in the Columbia Basin.

STRATEGIC GOALS AND OBJECTIVES

Goal 1: To have cutting-edge capacity to conduct scientific research that improves and advances dryland farmland productivity, resilience, profitability and sustainability for growers in the Columbia Basin.

Goal 2: To establish research directions and conduct scientific research that results in improvements in dryland productivity, resilience, profitability and sustainability in the Columbia Basin.

Goal 3: To foster relationships with local growers and stakeholders that facilitates both grower input on research and the dissemination of research findings, while maintaining an external communication process that provides relevant content while engaging the public in the work of CBARC.

Goal 1

Background

Currently CBARC is located on two facilities, near Pendleton and in Moro, which bracket the dryland grain production region east of the Cascades. The Pendleton station serves as the main location for most of the research, operations and administration. The station in Moro provides additional research fields that are used by CBARC staff and collaborators. Recently, a new laboratory/office facility was built at the Pendleton station. The new laboratory space offers the opportunity to obtain additional research instrumentation so that CBARC can become a self-sufficient center for soil quality and agronomics research. Besides the laboratory equipment needs, the station needs to renew the field equipment including harvesters, planters, sprayers and tractors. The facilities for weed science and cereal variety testing research are housed in old and outdated and rudimentary buildings and new laboratory square footage will need to be built to allow these programs to continue with their excellent work. Our greenhouse is in a state of disrepair and will need to be fixed to allow the research programs to carry out research through the winter months. The facility also has limited residential space to house students and visitors. In addition, additional research acreage will be needed in order to expand our research to accommodate new demands from growers and carry out precision agriculture and geospatial experiments. A fully equipped agricultural campus at CBARC will facilitate response to grower questions and additional problem-solving to address evolving regional needs.

Goal 1: To have cutting-edge capability and capacity to conduct scientific research which improves and advances dry farmland productivity, resilience, profitability and sustainability for growers in the Columbia Basin.

Objective. 1.1: Consider a new hire position to gain additional capacities using new data technologies.

- ▶ Hire new faculty to interface with Station researchers and utilize a precision agriculture approach and evolving data technologies.
- ▶ Additionally, pursue new partnerships with outside expertise on AI applications to agriculture, and engage collaborators to assist with the development of digital research technologies.

Objective 1.2: Increase utilization of new data collection technologies.

- ▶ Use innovative technology (e.g. drones, satellites) to collect data. Acquire and use up-to-date equipment and technology to meet current and future agricultural research challenges.
- ▶ Increase the use of geospatial management systems in research
- ▶ Collect data to validate practices recommended at the national level relevant to local production systems
- ▶ Use artificial intelligence (AI) and machine learning to expedite research, literature reviews and reduce costs

Objective 1.3: Maintain and enhance the partnership with USDA/ARS to secure continued use of labs and office space at the current site near Pendleton.

- ▶ Develop a Memorandum of Understanding (MOU) to clarify expectations, secure lab and office space, and define roles, and responsibilities.
- ▶ Improve facilities through the stabilization and diversification of funding sources to support facility renovation, additions and expand the acreage of available research fields.
- ▶ Increase advocacy to promote funding for facilities at the Pendleton station, and coordinate with the Oregon Wheat Growers League as an effective entity in this space and with the legal authority for lobbying.
- ▶ Increase the available residential housing for visitors, summer workers and graduate research assistants.
- ▶ Have a priority list for all new facilities and equipment under consideration
- ▶ Acquire additional research fields for large scale studies
- ▶ Acquire new vehicles to facilitate transportation to and from Moro, Corvallis, and Pendleton.

Objective 1.4: Guard against decreases in funding support, and increase the diversity of funding sources

- ▶ Identify and pursue private funding opportunities in cooperation with the OSU Foundation and the College of Agriculture to further research to help farmers and their communities.
- ▶ Pursue opportunities for contributions to scholarships, fellowships, visiting scholars, equipment, endowments, and facility improvements.
- ▶ Advocate with others for increased funding from the legislature for agricultural research and rural communities
- ▶ Re-emphasize the role and importance of the Land Grant mission.
- ▶ Continue to build strong relationships with congressional representatives and coordinate activities with peers in other states
- ▶ Use university resources to track changes in federal funding to avoid sudden funding decreases and to take advantage of new initiatives.
- ▶ Protect federal agreement funding by meeting contract expectations for 5-year renewals
- ▶ Pursue new equipment funds including new requests for funding from traditional federal sources

Goal 1 Anticipated Results

CBARC faculty will pursue new funding opportunities and fundraising while protecting against decreases in other forms of support. CBARC will actively pursue opportunities to create a new position and start new collaborations with outside entities to apply new data technologies to our research. CBARC leadership will continue communications with the USDA to ensure office and laboratory space availability to OSU personnel. This could include the creation of a new MOU, as well as the building of additional new shared space for OSU and USDA staff.

Goal 2

Background

CBARC has helped growers and stakeholders in the region by supporting research and extension on dryland wheat production systems. Research is showing that the Columbia Basin can support many alternative crops fitting our weather, climate condition and soils. Alternatives such as cover crops, legumes, and oilseeds can be incorporated to dryland wheat-based rotations to increase competitiveness, facilitate weed control, break disease cycles, and increase soil health. The region must address increasingly unpredictable year-to-year precipitation and temperature extremes. Direct seeding and chemical fallow are increasingly challenging due to the emergence of resistant weeds. The possibility of farming for carbon sequestration offers hope of additional revenue for wheat farmers. While environmental and human pressures indicate that dryland cropping practices need to be reevaluated, the elements for a successful agricultural economy exist in the Columbia Basin, and a sustainable and profitable agricultural future can be realized, assuming proper investment in research can result in new and useful management technologies.

Goal 2: To establish research directions and conduct scientific research which results in improvements in dryland productivity, resilience, profitability and sustainability in the Columbia Basin.

Objective 2.1: Identify and encourage more multidisciplinary and collaborative research responsive to grower needs for diverse and interrelated knowledge.

- ▶ Focus on research with a direct applied benefit as well as the acquisition of new basic knowledge about agro ecosystems
- ▶ Gain an economic analysis of research outcomes based upon producer implementation viability
- ▶ Address the growing demand for research knowledge while recognizing limited resources and set clear priorities
- ▶ Collaborate with universities outside the Pacific Northwest
- ▶ Collaborate with campus scientists to strengthen research partnerships across the university and explore opportunities to recruit new partners
- ▶ Share resources with other institutions proactively and encourage reciprocity
- ▶ Facilitate the development of new OSU varieties by working with the wheat breeding program in Corvallis. Speed up the process of releasing new wheat varieties by expanding research and branding wheat types
- ▶ Gain greater local input on research topics through Extension, field days, and relationships with growers.
- ▶ Strengthen working relationships with Extension and growers.
- ▶ Build upon the multi-disciplinary research among CBARC and other research institutions
- ▶ Work with industry to vet and address research ideas and questions
- ▶ Provide research that promotes wheat as a healthy source of food, fiber and minerals.
- ▶ Explore the use of dryland production systems to produce biofuel feed stocks
- ▶ Conduct carbon cycle analysis, measurements and understanding

Objective 2.2: Hire an economist to analyze the economic impact of dryland grain production practices in the region.

- ▶ Include an economist in priority staffing and advocate for the services of agricultural economists for all research stations
- ▶ Investigate the economic advantages of all cropping rotation systems, and assess the profitability of applied research initiatives.
- ▶ The economist position will evaluate wheat production from a business context, based on station research and long-term experiment data, which will benefit dryland wheat producers.
- ▶ Research the use of emerging and alternative crops

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- ▶ Identify and explore partnerships to produce value added agricultural products
 - ▶ Conduct life cycle analysis about how agronomic practice affects the decarbonization and economics of the system
 - ▶ Understand the economic effects of tillage and herbicide applications

Objective 2.3: Address emerging and long-term problems such as issues pertaining to herbicides, pesticides soil degradation, ground water and soil acidity.

- ▶ Study emerging problems related to herbicide resistant weeds and identify possible solutions
- ▶ Understand the effects of round-up elimination of regional farm production
- ▶ Understand the effects of soil acidity on agricultural production.
- ▶ Study human nutritional parameters in wheat and how they are affected by field conditions and management
- ▶ Leverage the use of long-term plots with new research questions in response to grower and society needs.
- ▶ Objective 2.4: Provide science based agricultural management strategies with a combination of economic and agricultural productivity research.
- ▶ Improve the public understanding of food production
- ▶ Pursue goals based on science, not ideology
- ▶ -Encourage extension to educate growers on the sources of new scientific information
- ▶ Provide the rationale for why CBARC exists and the importance of modern agricultural research and production
- ▶ Identify and document sound farming practices
- ▶ Evaluate the local relevance of dryland agricultural research conducted in other regions.

Goal 2 Anticipated Results

Engage in new multidisciplinary and collaborative research by networking with other state and national institutions. Pressing issues affecting wheat growers will be emphasized in in new and existing research projects in order to make our work relevant to our stakeholders. We will add an economics and profitability and life cycle analysis component to our long-term experiments and other research in order to inform local growers about the impact of agricultural practices.

Goal 3

Background

CBARC has historically had a strong relationship with wheat growers in the region. Our stakeholders inform new research directions and through our two liaison committees (Pendleton and Sherman). Our liaison committee meetings help stakeholders and staff to exchange the latest information about the latest research of the different programs, and also visit about the state of the facilities and future needs. However, there is still work to be done in order to make CBARC a well-known and utilized resource for the dryland wheat growers of the region. The methods of outreach, education and service delivery are changing, and there is a diversity of choices for customers to learn about our activities. At present, these interactions are more likely to be carried out through web-based videos, video conference calls, and via online information, but individuals have preferences about how to be reached. It is important to make adjustments in how we present ourselves, and how we deliver the content depending on the particular audience.

Goal 3: To foster relationships with local growers and stakeholders that facilitates both grower input on research and the dissemination of research findings, while maintaining an external communication process that provides relevant content while engaging the public in the work of CBARC.

Objective 3.1: Rebuild grower participation on the Liaison Committees for the Pendleton and Sherman stations.

- ▶ Recruit and increase overall involvement
- ▶ Establish effective time-limited roles and responsibilities for participants
- ▶ Inform potential members of the Committee function and utility
- ▶ Gain commitments for a longer and more robust relationship with area growers
- ▶ Make meetings about grower input and discussion

Objective 3.2: Increase involvement of local growers in the work of CBARC

- ▶ Increase site specific research and farmer partnership on research practices and technology
- ▶ Increase partnerships with growers leading to more farm trials
- ▶ Improve on-farm testing of farm scale activities for application, use of technology and organizational fit.
- ▶ Conduct annual team brainstorming/problem solving sessions.

Objective 3.3: Improve external communication with all stakeholders, growers, and the local community

- ▶ Become better-known outside of wheat producer systems
- ▶ Expand outreach to the public in the region through social media
- ▶ Improve content/information dissemination by targeting key audiences (e.g.: growers, other scientists, and key public groups)
- ▶ Build upon the CBARC scientist and grower connections to disseminate knowledge
- ▶ Ensure timely dissemination of useful research to growers
- ▶ Tell stories of value through a variety of approaches (e.g.: conference presentations, posters, websites, and make all CBARC research digitally accessible)
- ▶ Complete the transition from paper to digital media.
- ▶ Start a CBARC newsletter
- ▶ Collaborate with the College of Agriculture Communication Office to better use public relations, stakeholders and the media to elevate the visibility of CBARC
- ▶ Engage the public and growers in a way that will increase financial support for CBARC
- ▶ Make improvements in the CBARC website to reflect its national image and reputation
- ▶ Participate in the local community networks

Objective 3.4: Conduct community outreach to represent CBARC research in a global context of climate change, natural landscapes and food security.

- ▶ Use social media and short videos to better communicate with stakeholders
- ▶ Strengthen field day activities and involvement by eliminating barriers to field day attendance (e.g.: encourage kids to attend)
- ▶ Attend the tri-state wheat convention
- ▶ Attend the 100 years of Wheat League 2026 in Bend
- ▶ Obtain more recognition and support from urban populations
- ▶ Coordinate with extension as they develop materials specifically for educational activities
- ▶ Improve storytelling about the work of the Center
- ▶ Illustrate to the public how the agricultural community is a good environmental steward
- ▶ Promote recognition and awards for research faculty and area producers
- ▶ Build relationships crop advisors

Goal 3 Anticipated Results

In order to revitalize both Liaison Committees we will work towards recruitment on young and active growers from the region. This will involve coordination with the Oregon Wheat Growers League, and possibly the Washington Association of Wheat Growers. Improved communication with growers, and the local community will be achieved via increased participation in community events and additional on-farm activities such as research and demonstration plots and tours. National and international relevance will be achieved by collaborative work, and participation in meetings and conferences.

OPERATIONAL OBJECTIVES

The strategic directions of the Center can only be realized if other operational priorities are also met. The Center recognizes the importance of the following operational priorities to continue baseline operations and to have the resources, partnerships and community support necessary to achieve the above stated strategic goals. The Center's operational priorities include:

- ▶ Purchase new equipment as needed for research and demonstration
- ▶ Fund and facilitate ongoing research
- ▶ Maintain regional relevancy
- ▶ Enhance existing industry and community partnerships
- ▶ Facilitate grower decision-making on key issues such as tillage, weed control, fertilizer use, soil health and environment stewardship
- ▶ Provide vital knowledge for community education.

A balance between ongoing operational objectives and the effective realignment of both new and existing resources toward strategic goals and objectives are both necessary key actions to achieve stated goals and to protect ongoing operations.

Administrative Actions

In addition to the CBARC strategic direction, strategic planning participants also identified 3 administrative goals to improve organizational operation and capacity.

Objective A1: Work with other effected centers and departments to identify campus barriers to success:

- ▶ Better utilize campus resources to meet center objectives
- ▶ Identify a college-wide direction to the provision of on-site housing for students, new and visiting faculty throughout the state.
- ▶ Gain greater assistance and leadership from campus for marketing, external communication and outreach
- ▶ Find more effective ways to work with Extension to effectively disseminate research information and to gain input and insights from those who apply the research to further inform future research.

Objective A2: Advocate on behalf of Columbia Basin agricultural interests by providing scientifically researched data for various decision-makers.

- ▶ Advocacy with the legislature
- ▶ Identify and address barriers created by government bureaucracy
- ▶ Identify regulations and restrictions which hinder regional producers from being effective in their work.

Objective A3: Coordinate with other OSU research centers and the Dean's office to address difficulties in faculty and staff hiring practices and retention efforts.

- ▶ Find ways to improve and shorten the hiring process
- ▶ Provide competitive salaries and benefits in the local marketplace
- ▶ Consider 12-month appointments for faculty members

IMPLEMENTATION PLAN AND ASSESSMENT OF OUTCOMES

Each objective can be quantified and reviewed annually to implement the overall action or operational plan. Such a plan is developed once strategic directions are set. This requires each strategic objective to be broken down into implementation steps (i.e.: activities and tasks). Each implementation step should be assigned a lead person and a timeline (what, by who, by when). These activities, roles, or responsibilities can be included in job descriptions or given as special assignments.

An outcome evaluation approach can also be used to see if the stated measurable objectives were obtained or not. The Center will also enhance its service responsibilities to the community by carrying out periodic communication with stakeholders regarding progress toward common and strategic objectives. Further assessment can be achieved through an annual review of the plan with stakeholders, use of feedback forms, formal and informal assessment, and formal employee evaluation and review. Key stakeholders, advisory board members and faculty will receive periodic updates on the progress toward these strategic goals. The strategic goals will be reviewed at an annual faculty meeting and key individual assignments to implement the plan will be included as part of each faculty and staff member's annual review.

Progress toward Center's goals will be evaluated during annual reviews of faculty, staff and our Center review with the CAS Dean. Quantitative metrics (e.g.: new research partnerships, equipment utilization) will be evaluated annually where possible and discussion during reviews will assess qualitative metrics (e.g.: quality of facilities, community relationships).

APPENDIX

Appendix A: Community Survey

Attendees to the two Field days held in the summer of 2023 were encouraged to respond to an online survey. In addition, additional stakeholders were also approached via email, and through the Oregon Wheat Growers newsletter. In this survey, the participants were shown the stated goals of the strategic plan draft, then asked for feedback.

The survey questions were:

1. Will these stated goals enable CBARC to continue to conduct important agricultural research in the region?
2. Are the stated goals responsive to the interests of farms, families, and communities in the region?
3. The survey participants were also encouraged to write in additional comments or suggestions about the aims detailed in the strategic plan draft.

Survey follow up:

Based on feedback and internal discussions, the committee worked to prepare an initial draft of the strategic plan. Then the draft goals were sent out for additional comment to the stakeholder lists via the survey. Many useful comments came back, including several substantive and thoughtful responses and suggestions. These new ideas and refinements to the draft were all included or otherwise addressed in this final plan.