

**KLAMATH BASIN
RESEARCH and
EXTENSION CENTER
STRATEGIC PLAN**

2021 - 2028



Oregon State
University

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INTRODUCTION

The Morrill Act of 1862 established Oregon State College as the state's institution "to teach such branches of learning as are related to agriculture and the mechanical arts." In 1887, the Hatch Act established agricultural experiment stations, in connection with colleges in several states, to strengthen agricultural research and promote technological innovation. The Smith-Lever Act of 1914 established a system of cooperative extension services connected to these land-grant universities. The Extension Service began in 1917 to inform the public about ongoing developments in agriculture, home economics, public policy/government, leadership, 4-H, economic development, and coastal issues. The Klamath Basin Research & Extension Center was founded in 1937 to carry out these government mandated services.

The Klamath Basin Research and Extension Center (KBREC) is one of thirteen Oregon Agricultural Experiment Station research facilities studying food and fiber production, processing and marketing, wise use of natural resources, human nutrition, commercial fishing, and other topics important to the economic and environmental well-being and conditions of the local areas. The Oregon Agricultural Experiment Station is the research arm of Oregon State University's (OSU) College of Agricultural Sciences (CAS) with locations as varied as Oregon's climates and landscapes. Research programs began in 1939 when the Oregon Legislative Assembly appropriated funds to study the control of root-knot nematodes in potatoes grown in the Klamath Basin. That same year, the U.S. Bureau of Reclamation leased 86 acres of saline and saline-sodic soils to Oregon State College. In 1944, the Klamath County Court provided additional funds to support research on a wider range of soils and crops. The land and buildings at the Center are owned by Klamath County and leased to OSU at no cost.

Klamath Basin Research & Extension Center carries out the mission of the College of Agricultural Sciences, which recognizes that 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 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.



Our 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
4. Working and Natural Landscapes

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 University priorities that Klamath Basin Research and Extension Center conducts research and extension activities.

HOW WE WORK

The Klamath Basin Research and Extension Center plays an integral role in the search for better ways to feed and fuel the world into the future through the development of new, sustainable agricultural practices for Oregon and the world. The Center's agricultural programs center upon potatoes, small grains, forages, and alternative crops. Extension and research faculty members provide research-based education and technical assistance on crop production, financial management, and marketing for commercial farmers. They focus on the impact of ongoing research and its application in practice. Identification of new and superior varieties of agricultural products is

Faculty members on-site are appointed to Oregon State University departments of Crop and Soil Science, Horticulture or Animal Science. These departments form the historic foundation of educational programs in the College of Agricultural Sciences. Oregon State University's Department of Crop and Soil Science has significant internationally renowned crop research and outreach programs in barley, wheat and hop breeding, hemp, oilseeds and fiber crops, forages, potatoes, and seed production. Soil faculty members carry-out extensive basic research on soil biology, chemistry, physics, geology, hydrology, fertility and nutrient cycling. Crop Science faculty members and

student researchers examine cereal genomics, entomology, herbicides, the chemistry behind current weed management practices, plant breeding and genetics, cropping systems, and agricultural watersheds. Research and extension faculty members work with campus departments to assist agricultural production statewide.

KBREC has a long and productive history of partnerships in the Klamath Basin. The Center has a history of cooperation with other branch stations, the OSU campus-based departments, regional agricultural development programs, and regional commercial growers. For example, the ongoing cooperation between OSU and the University of California in Tulelake brings together qualified researchers to address regional needs. County governmental agencies continue to

be key partners in the development of regional policies and procedures. An advisory committee of experienced local growers help Center staff identify research needs, support the work in progress, and take a leading role in the application to their own operations. Local OSU researchers and extension faculty members help distribute new information and demonstrate its application where it is needed.

It is within this history and context that the Center conducts its work. The Center is further guided by University, College of Agricultural Sciences, and Experiment Station & Extension missions to carry out its responsibilities. This work is further informed by the values and commitments made by University faculty and students.



conducted in cooperation with plant breeders and geneticists at Oregon State University, USDA-ARS, and other cooperating universities throughout the United States. In addition to variety development, researchers seek ways to improve efficiencies in areas such as: cultural management, integrated pest management, irrigation, and soil productivity. Klamath County researchers and extension agents work with farmers, farm supply companies, agricultural product processors, and other agri-business people. The Center, through extension activities, provides online resources, farm to school and nutrition education, agricultural research, Master Gardener program, and home garden and landscape education.

STRATEGY FRAMEWORK

The Klamath Basin Research and Extension Center operates within the broader context of Oregon State University, the College of Agricultural Sciences and the State's Research and Experiment Stations. The following mission statements, values, and commitments provide the framework for all Center activities.

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 the three Signature Areas: Advancing the Science of Sustainable Earth Ecosystems; Improving Human Health and Wellness; and Promoting Economic Growth and Social Progress.

College of Agriculture Mission

College of Agricultural Sciences recognizes that 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 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.

Our inherent strengths and aspirational opportunities through which we will advance that unifying purpose, include:

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

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 the economic, social and environmental benefit of Oregon.

Our Values and Commitments

The faculty and staff members of the Klamath Basin Research and Extension Center are committed to the following values, responsibilities, commitments, and principles and practices as expressed by the University and the College of Agriculture:

Members of KBREcT adhere to the following values:

- ▶ Uphold the highest standards of professional conduct in research, education, and communication with an uncompromising commitment to the advancement of knowledge.
- ▶ Honor the accomplishments and contributions of others to promote a healthy and productive work ecosystem.
- ▶ Make education that promotes innovation, inclusion and collaboration in a learner-centered environment accessible.
- ▶ Foster interdisciplinary collaboration and engagement through mutual respectful and accountable partnerships.
- ▶ Engagement with a wide diversity of people and perspectives to ensure work activities and products are socially responsible and responsive.

As a member of the Oregon State University family we honor these commitments:

- ▶ Provide excellent education for all learners and innovate and collaborate in research to drive solutions.
- ▶ Seek out collaborations with other sciences, the arts, humanities and engineering.
- ▶ Be agile and entrepreneurial in a rapidly changing resource environment.
- ▶ Welcoming others and foster belonging and success for all.
- ▶ Be mindful of this special place and the people served by the Land Grant mission.
- ▶ Be equitable and inclusive.

The combination of these guiding and overarching principles provides the context and framework for this strategic planning process.

STRATEGIC PLANNING PROCESS

The Klamath Basin Research and Extension Center identified the need for a seven-year strategic plan to guide the Center’s operations. A change in KBREC AES leadership and the addition of new faculty members prompted the need for planning. In addition, the continued uncertainty of irrigation water deliveries made the identification of stakeholder needs even more timely and important.

The Strategic Planning process seeks to establish new activities and directions and validates current activities through the involvement of regional producers and agribusiness representatives. A committee was formed to develop a big picture regional strategic plan based upon stakeholder input. This approach is used to gain insights and understandings into the interests and goals of the communities and constituencies served by the Center. The process also provides a meaningful learning experience for the participants and develops opportunities for programmatic partnerships and collaborations. The process consists of a series of three facilitated community sessions of three hours each.

On July 7, 2020, the Strategic planning committee met for the first time to conduct the “SWOT” analysis to identify strategic directions. Members completed an environmental scan of various agricultural and community interests. The primary focus was on the “opportunities” and the “threats” the community may face in the next few years. Participants focused on how to limit these threats and increase opportunities. There was also a secondary analysis of the strengths and weaknesses of the Center faculty and staff to respond to these opportunities and threats. Committee members reached out to various represented constituencies between meetings to validate and inform the process.

On July 21, 2020, the committee reconvened to identify key strategic areas of interest and various methods to address these regional issues. Committee members continued to work with representatives of the community, commodity groups, farmers and producers to modify the strategic directions outlined in the plan. On August 25, 2020, the committee met to review the recommendations and suggest final changes to the identified strategic objectives.

The purpose of the Strategic Planning Process is to create a simple guiding document for the Center and to move local leaders through a community process that engenders support and advice for the Center. This strategic plan integrates and aligns University, College and Center plans toward a common end. This final product is this concise written report that can be used to guide the development of the Center’s operational and programmatic plans and to recruit new partners to achieve the strategic objectives. This planning process also generated ideas for marketing, fundraising and communications that can be addressed in the operational activities of the center.

The process to evaluate the achievement rests with the creation of measurable operational objectives drawn from the strategic objectives. These specific working objectives are linked to the action plans of faculty and staff members. Each person on staff, along with other OSU faculty and administrators, and community partners will be given various responsibilities, actions, and objectives (position descriptions) 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 the strategic objectives. Assessment of work activities and outcomes will be a regular part of plan assessment and employee review.

Committee Members

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

Participant	Affiliation	Stakeholder Groups that Provided Input
Brian Charlton	OSU KBREC - AES	Farm Credit Services, Farm Bureau
Biswanath Dari	OSU KBREC - AES	NRCS, Soil & Water Conservation District
Ian McGregor	OSU KBREC - Extension	Klamath Community College, FFA, Cattle Industry Stakeholders
Rob Wilson	UC ANR IREC	US Bureau of Reclamation, US Fish & Wildlife Service
Ty Hulse	Basin Fertilizer & Chemical	Professional Crop Advisors
Dan Chin	Owner/Operator Chin Farms	Commodity Commissions, Grower Groups
Ty Kliewer	Owner/Operator Kliewer Farms	Klamath Water Users Association, Local Irrigation Districts
Ryan Graebner	OSU Hermiston	OSU Extension Specialists
Nichole Sanchez	OSU KBREC - Extension	Local Food Systems
Misty Buckley	OSU KBREC - AES	Community Engagement, Planning Support
Jeffrey Hale	Planning Facilitator	OSU, Shotpouch Foundation

SITUATIONAL ANALYSIS

The first meeting of the Strategic Planning Committee identified the following external opportunities and threats and organizational strengths and weaknesses. This information was further refined during the second and third meeting to focus on actionable topics and make the best use of existing and anticipated resources.

External Opportunities

- ▶ Develop alternative crop systems and emerging value-added markets such as mustard, grass, and hemp
- ▶ Apply cropping production research studies to integrate agriculture commodity production
- ▶ Irrigation efficiency
- ▶ Develop and test new products (e.g., sensors)
- ▶ Encourage locally sourced food with a story that serves niche markets to make best use of existing local resources
- ▶ Conduct small farm research and expand extension services
- ▶ Improve livestock and forage management
- ▶ Research and demonstrate agriculture technology and engineering
- ▶ Promote “field research” scale and on-farm demonstrations



External Threats

- ▶ Unpredictable water supply (year-to-year)
- ▶ Unpredictable and decreased funding for Extension and Research staff
- ▶ Community division and sometimes divisiveness over use of water
- ▶ Lack of community infrastructure for processing and transportation
- ▶ Lack of processing facilities in the area due to low scale of production
- ▶ Inadequate use of new technology and agricultural engineering
- ▶ Slow or inadequate producer implementation of research results

Organizational Strengths

- ▶ Strong community relationships
- ▶ Strong support from the County and regional growers
- ▶ Effective collaboration with IREC potato research
- ▶ Community confidence based on the longevity and skills of faculty and staff members
- ▶ Good relationships with other research station researchers
- ▶ Staff availability, collaborative attitude, knowledge, and contacts for expertise



Organizational Weaknesses

- ▶ A lack of specialized equipment
- ▶ A “one crop” focus due to a lack of funding for other commodities
- ▶ Lack of new, relevant, and adaptable equipment for research
- ▶ Unfulfilled producer desires for research due to a lack of funding sources
- ▶ Limited outreach (farm and field tours)
- ▶ Aged infrastructure and significant deferred maintenance of the KBREC facilities
- ▶ University bureaucracy is often slow to respond to opportunities
- ▶ Lack of graduate students on-site
- ▶ Lack of marketing for various crops in the region

Information from the SWOT analysis was further refined by committee members, the facilitator and faculty to identify the Center’s mission and how to apply that mission to the strategic directions identified during the process.

KLAMATH BASIN RESEARCH AND EXTENSION CENTER MISSION

Conduct scientific research, educate the community, and collaborate with regional partners in the Klamath Basin to improve agricultural competitiveness and resilience in ways that benefit both working and natural landscapes.



STRATEGIC DIRECTIONS, OBJECTIVES, KEY ACTIONS AND DELIVERABLES

The implementation of the strategic plan relies on a clear understanding of each goal and the development of both strategic and measurable actions to carry out the attainment of the goal. The Center will develop key actions to carry out the following strategic objectives. The plan includes strategic directions, key actions to be achieved, and deliverables and a way to measure those results.

Three strategic directions were identified by the members of the committee in keeping with the mission of the Center. The Klamath Basin Research and Extension Center will conduct scientific research, educate the community, and collaborate with regional partners to:

1. Enhance working and natural landscapes and agricultural competitiveness through the efficient use of irrigation in the Klamath Basin
2. Research and demonstrate methods to improve agricultural competitiveness and resilience of traditional and alternative commercial cropping systems
3. Research and demonstrate methods for cost-effective, competitive, and resilient forage and livestock production

STRATEGIC DIRECTION 1: Enhance working and natural landscapes and agricultural competitiveness through the efficient use of irrigation in the Klamath Basin

Background

Water use in the Klamath Region has been a major concern since 1884 when the pioneer families first diverted the run-off of the Klamath River. Literal wars have been fought over water in the Basin. In 1934 the Bureau of Reclamation established irrigation in the area. This decision might have been the source of community divisiveness for many years. The area still must address a unpredictable water supply (year-to-year), subsequent water shortages, the historic and tribal rights of Indigenous Peoples, fish survival and ecological diversity, and the effect of decades of water policy and law. More knowledge is needed regarding the quality and quantity of water and how it effects the viability and sustainability of the region.

Objectives

- 1.1 Facilitate and advocate information strategies that enable long-term adaptation for community resilience
 - ▶ Graduate level review of the literature on selected topics such as:
 - Flow study on Klamath Basin hydrology
 - Fish science
 - Document and quantify efficiencies made in agriculture
 - Identify best crops based on water allocations (up and down years)
 - ▶ Inventory existing university, public agency, and local knowledge to have a baseline of data for public policy formation regarding fish, wildlife, agronomics, and community development
 - ▶ Advocate for increased participation by University faculty and administration in the research, formation, and advocacy of public policy
- 1.2 Facilitate and advocate for the review of regional water quality and quantity studies and apply accurate scientifically based solutions to the regional environmental and agricultural problems.
 - ▶ Review regional water quality and quantity studies
 - ▶ Collect and categorize existing knowledge on water efficiency for high and low water years
 - ▶ Re-examine the role of forage modernization and livestock on the efficient use of water
 - ▶ Recruit other researchers at the University to serve on a team to address water efficiency in the Klamath Basin
 - ▶ Facilitate the use of peer-reviewed science to address community problems
- 1.3 Research and demonstrate forage practices that maximize water efficiency and effectiveness in coordination with College of Agricultural Sciences researchers and industry stakeholders
- 1.4 Demonstrate agriculture technology and engineering solutions to regional problems
 - ▶ Use on-farm demonstrations to show the efficacy of all research findings

Key Actions

Key Actions	Responsibility	Timeline
1.1 Inform strategies with a graduate level review of the literature and historical practices: <ul style="list-style-type: none"> ▶ Flow study on Klamath Basin hydrology ▶ Fish science ▶ Document and quantify efficiencies made in agriculture ▶ Identify best crops based on water allocations (up and down years) ▶ Inventory existing university, public agency, and local knowledge 	B. Charlton	Spring 2022
1.2 Use existing regional water quality and quantity studies <p>Apply research findings to the regional environmental and agricultural problems</p> <ul style="list-style-type: none"> ▶ Review regional water quality and quantity studies for accuracy ▶ Collect and categorize existing knowledge on water efficiency in all conditions ▶ Re-examine the role of forage modernization and livestock on the efficient use of water ▶ Recruit researchers at the University to serve on teams to address water efficiency ▶ Facilitate the use of peer-reviewed science to address community problems ▶ Assist in the development of regional public policy ▶ Encourage increased participation by University faculty and administration in the research, policy-formation, and advocacy of public policy in the region 	B. Charlton	Ongoing
1.3 Research and demonstrate forage practices that maximize water efficiency	B. Dari I. McGregor Other faculty	Ongoing
1.4 Demonstrate agriculture technology and engineering solutions to regional problems <ul style="list-style-type: none"> ▶ Use on-farm demonstrations to show the efficacy of all research findings ▶ Develop additional diverse partnerships for on-farm demonstrations 	B. Dari B. Charlton	Ongoing

People responsible for key actions will seek the counsel and participation of community leaders, institutions, businesses, and public agencies. Potential partners include organizations such as the Legislature, University leadership, County commissioners, various commodity commissions, large acre growers, other researchers (e.g., University of California), and federal and state agencies.

Deliverables

1. Knowledge and outreach to improve community and farm responses to annual increases and decreases in water supply for irrigation
2. Scientifically informed agronomic, environmental and community agricultural policy and improved agricultural and environmental practices to meet the needs of natural and man-made environments
3. A flexible team of researchers ready to respond to agricultural, economic, social, environmental, and political issues in the area with scientific knowledge
4. Sustainable water of sufficient quality and quantity to meet the needs of natural and man-made environments

STRATEGIC DIRECTION 2: Research and demonstrate methods to improve agricultural competitiveness and resilience of traditional and alternative commercial cropping systems

Background

Historically, KBREC has supported growers and stakeholders in the region by supporting research and extension on multiple crops. However, over time, the priority and needs of the region have changed and resources available to meet these priorities became more limited. Research clearly indicates that the Klamath Basin can be the home for many alternative crops appropriate for the weather, climate condition and soil type. Crops such as industrial hemp for fiber, feed or other medicinal value-added products, grass seed, and cover crops forage production can be further integrated with animal farming to increase competitiveness. Identification and development of alternative and value-added crops, technological applications, natural resource conservation, and processing to meet various market demands will increase the agricultural viability and competitiveness.



Strategic Objectives

- 2.1 Maintain and expand existing small grain and potato research, education, and outreach.
- 2.2 Collect and categorize existing knowledge of alternative crops suitable for the region (e.g. grass, malt barely, hemp)
- 2.3 Continue collaborations with IREC on potatoes, irrigation, and hemp
- 2.4 Research viability of alternative forage crops
- 2.5 Use research on crop selection, technological applications, and regional crop market demand to identify and encourage the viability of “low carbon” food in the Klamath Basin
 - ▶ Research methods to improve current crop markets (e.g. Hay press)
- 2.6 Enlist the assistance of food scientists to help tell the story of local and regional food and apply that story to the processing and sale of food.
 - ▶ Focus on value added, localized products that can be finished here (e.g. seed)
- 2.7. Use on-farm demonstrations to test and demonstrate practices and products
 - ▶ Develop additional diverse partnerships for on-farm demonstrations
 - ▶ Disseminate research through publication and community outreach

Key Actions	Responsibility	Timeline
2.1 Maintain and expand existing small grain and potato research, education, and outreach	B. Charlton	Ongoing
2.2 Collect and categorize existing knowledge of alternative crops suitable for the region (e.g. grass, malt barley, hemp)	All Faculty and Staff	Ongoing
2.3 Continue collaborations with IREC on potatoes, irrigation, and hemp	B. Charlton	Ongoing
2.4 Research viability of alternative forage crops	All Faculty and Staff	Ongoing
2.5 Use research on crop selection, technological applications, and regional crop market demand to identify and encourage the viability of “low carbon” food in the Klamath Basin <ul style="list-style-type: none"> ▶ Research methods to improve current crop markets (e.g. Hay press) <ul style="list-style-type: none"> • develop alliances with partner agencies • develop research, education, and advocacy strategies 	I. McGregor	Annual Review
2.6 Enlist the assistance of food scientists to help tell the story of local and regional food and apply that story to the processing and sale of food <ul style="list-style-type: none"> ▶ Focus on value added, localized products finished here (e.g. seed) 	N. Sanchez I. McGregor	Annual Review Periodically
2.7 Use on-farm demonstrations to test and demonstrate practices and products <ul style="list-style-type: none"> ▶ Develop additional diverse partnerships for on-farm demonstrations ▶ Disseminate research through publication and community outreach 	All faculty and staff All faculty and staff	Seasonally Periodically

Deliverables

1. Regional growers improve agronomic and environmental conditions through the adoption and adaption of new crops, crop management and application of technology and engineering solutions. Research and apply methods to disrupt disease cycles through knowledge of use of herbicides, resistance, result reports, etc.
2. A database and research inventory of knowledge and best practices to make the best use of the region’s limited resources.
3. Expanded Center capacity to conduct on-site and off-site research relevant to regional stakeholders
4. Cover crops and natural resources that ensure soil health as appropriate

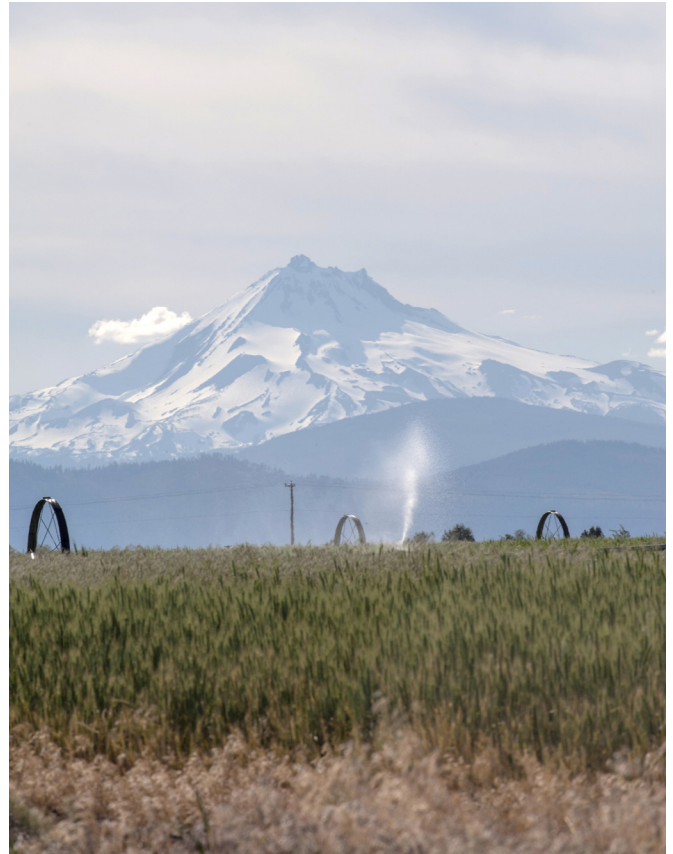
STRATEGIC DIRECTION 3: Research and demonstrate methods for cost-effective, competitive, and resilient forage and livestock production

Background

Research and extension on forage crops and livestock production is a periodic focus for research in the Klamath Basin. Recently, there is an increase in animal production especially for beef, and the forage acreage has increased to its present high level. There is a pressing need for additional scientific research, demonstration, and extension to further develop sustainable ways to manage and integrate both forage and animal production in a cost-effective and carbon neutral way. Research topics such as annual production and quality of mixed forages, irrigation water use efficiency, new technological solutions, and development of new marketing and transportation methods are integral to this goal. Research and the dissemination of knowledge can greatly increase the efficiency of livestock production, especially beef, in the western states. Community partnerships with organizations such as the Oregon Dairy Association (ODA) will strengthen the approach to improve competitiveness and resilience.

Strategic Objectives

- 3.1 Attract a USDA-approved slaughterhouse and feedlot to the region
- 3.2 Modernize forage practices
 - ▶ Formation of teams (agronomics, sustainability, rangeland management, soil, etc.)
- 3.3 Re-examine the role of forage and livestock production on the use of water
 - ▶ Formation of teams (agronomics, sustainability, rangeland management, soil, etc.)
- 3.4 Identify what agricultural activities are necessary to process regionally in a sustainable manner.
 - ▶ Integrated resource management
 - ▶ Sustainable and integrated
 - ▶ Fit to your resource inputs
 - ▶ Post harvest management meeting to compare for sustainability
 - ▶ Cost-effective transportation
 - ▶ investigate production strategies that decrease carbon and increase food production.
- 3.5 Categorize, disseminate, communicate, on-farm demonstrations



Key Actions	Responsibility	Timeline
3.1 Advocate and inform efforts to attract a slaughterhouse and feedlot to the region	Dairy Council, Large Acre Center Faculty, Other Economic Development Organizations	2025
3.2 Modernize forage practices <ul style="list-style-type: none"> ▶ Formation of teams (agronomics, sustainability, rangeland management, soil, etc.) 	Center Faculty	Ongoing
3.3 Re-examine the role of forage and livestock production on the use of water <ul style="list-style-type: none"> ▶ Formation of teams (agronomics, sustainability, rangeland management, soil, etc.) 	Faculty and Area Teams	Annually
3.4 Identify what agricultural activities are necessary to process regionally in a sustainable manner <ul style="list-style-type: none"> ▶ Integrated resource management ▶ Sustainable and integrated ▶ Fit to your resource inputs ▶ Post harvest management meeting to compare for sustainability ▶ Cost-effective transportation ▶ Investigate production strategies that decrease carbon and increase food production 	Regional Producers	Ongoing
3.5 Categorize, disseminate, communicate, on-farm demos	Center Faculty and Staff	Quarterly

Klamath County Economic Development, the Dairy Council, large acre growers, agricultural leaders, land managers, community-based organizations, environmental and conservative organizations, and other researchers will assist in these key actions.

Deliverables

1. Integrated livestock and forage production into product channels to reduce overall shipping to develop local end products
2. Improved sustainability of forage production and management in the face of limited water supply and labor.
3. Explore and document options for a regional slaughterhouse and feedlot

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 in order to continue baseline operations and to have the resources, partnerships and community support necessary to achieve strategic goals.

The Center's operational priorities (in no particular order) include:

- ▶ Maintain existing facilities (address deferred maintenance issues)
- ▶ Purchase new equipment for research and demonstration
- ▶ Fund ongoing research
- ▶ Enhance partnerships
- ▶ Maintain community support
- ▶ Develop a comprehensive communication plan
- ▶ Recruit and support on-site graduate students
- ▶ Maintain regional relevancy
- ▶ Facilitate community decision-making
- ▶ Provide vital knowledge for community education

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

ASSESSMENT OF OUTCOMES

Each objective can be quantified annually to implement the overall action plan. These actions are measured in the context of evaluation criteria established for Experiment Station and Extension services. An outcome evaluation approach can also be used to see if the stated measurable objectives were obtained or not. The Center enhances its service and responsibility 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 strategic directions. The strategic directions will be reviewed, and key actions identified for the next period during each faculty and staff annual review.

