

Vision

To be global leaders in academic excellence and impactful innovations through creative collaborations in the grains and food value chain.

Mission

The department strives to provide high-quality education, foster innovation in grains and food science research, and build strong industry partnerships to meet the evolving needs of global food systems.

Values

Connection

Courage

Impact

Learner-focused

People-centered

Stewardship

We are stronger together — cultivating trust and building relationships to connect our K-State community with our state, nation and world

We lead with bold conviction — rising to the moment, even when the course is uncharted, to deliver the greatest good for areas of greatest need.

We listen, adapt and challenge the status quo — leading change through learning and discovery that transforms lives and creates shared prosperity for all.

We welcome all who seek to learn and grow — providing an accessible, inclusive and exceptional experience that helps them achieve their potential.

We are everything because of our people — supporting, valuing and inspiring our entire K-State community and championing a culture of belonging for all.

We are committed to our future — using our resources responsibly to leave a positive, lasting legacy.

Primary Goals

The 2024-2030 strategic plan is structured around four primary goals. Specific goals and strategies are provided to each primary goal. The department's operational plan includes tactic level activities.

- Deliver highly impactful educational experiences
- Deepen our relationships with stakeholders
- Foster innovation and research excellence
- Create an agile and change-ready culture

Strategic Plan Development

The strategic plan was developed in alignment with the Next-Gen K-State Strategic Plan and the College of Agriculture's strategic priorities. The process was collaborative, engaging a wide range of stakeholders through 25 interviews with 55 participants, including undergraduate and graduate students, faculty and staff, university collaborators, university and college leadership, and industry representatives from milling, baking, pet food, feed, and state commodity organizations. Participants were selected by departmental leadership following nominations from faculty and staff. Small groups of faculty and staff worked together to develop outcomes for 2027 and 2030, with faculty and staff having opportunities to provide input and shape the plan at each stage of the process. This inclusive approach ensured that the plan reflects diverse perspectives and is positioned to drive future growth and innovation.



Goal 1: Deliver highly impactful educational experiences for all learners – undergraduate, graduate, industry professionals, and other non-degree seeking adults.

Goal 1.1: Provide a rigorous, industry-relevant curriculum by regularly reviewing and improving academic programs, course requirements, and offerings, while integrating practical, applied learning experiences.

Strategy 1.1.1: Review and adapt the degree and program portfolio to include offerings to best serve students and the industry.

Strategy 1.1.2: Review and adapt the content and delivery modes of the curriculum to align with emerging industry needs.

Strategy 1.1.3: Increase practical, applied learning opportunities (i.e., internships, research projects, international experiences, community engaged learning) for all students.

Goal 1.2: Improve recruitment, retention and engagement practices to support success of a diverse learner population.

Strategy 1.2.1: Increase the number of highly qualified graduates of undergraduate degree programs by improving enrollment, retention, and completion rates.

Strategy 1.2.2: Enhance the reputation and national competitiveness of graduate programs.

Strategy 1.2.3: Identify and develop offerings for domestic and international industry professionals and other non-degree seeking learners.

Strategy 1.2.4: Provide student success programs and services that engage students and foster a supportive and inclusive environment.

Strategy 1.2.5: Expand opportunities for graduate student engagement with scholarly research and industry-relevant experience.



Goal 2: Strengthen position as a global leader in addressing industry challenges.

Goal 2.1: Enhance networking and stakeholder engagement.

Strategy 2.1.1: Increase communication and collaboration with industry partners.

Strategy 2.1.2: Strengthen alumni network to promote lifelong connections and mutually beneficial interactions.

Goal 2.1: Expand partnerships and outreach activities with external stakeholders to solve industry challenges.

Strategy 2.2.1: Grow continuing education and workforce development activities for domestic and global partners.

Strategy 2.2.2: Expand international engagements through collaborative research.

Goal 3: Foster innovation and research excellence as a global leader in grain and food science.

- **Goal 3.1:** Grow and align resources to support strategic priorities.
- **Strategy 3.1.1:** Align staffing and budget allocations to advance innovation in research strategic priority areas.
- **Strategy 3.1.2:** Grow extramural funding to support research and outreach.
- **Strategy 3.1.3:** Grow financial resources through strategic fundraising, including expanding private donations and developing new revenue streams.
- **Goal 3.2:** Expand research collaborations with the industry, other K-State departments, and other universities to leverage interdisciplinary expertise and improve innovation.
- **Strategy 3.2.1:** Grow departmental research and scholarship to increase national and international reputation.
- **Strategy 3.2.2:** Strengthen the technology transfer pipeline to address current and emerging industry needs.
- **Strategy 3.2.3:** Engage industry partners to define and collaborate on research projects that advance the industry.
- **Strategy 3.2.4:** Convene teams of interdisciplinary faculty to create innovative research collaborations in priority areas.
- **Goal 3.3:** Build state-of-the-art facilities to support innovation and interdisciplinary research and discovery.
- **Strategy 3.3.1:** Continue to increase investment in upgrading facilities and research capabilities, particularly core and collaborative labs and research spaces.
- **Strategy 3.3.2:** Plan for the utilization of new spaces and resources to align with the department's research priority areas and anticipated growth.



Goal 4: Create an agile and change-ready culture to support innovation and growth initiatives.

Goal 4.1: Strengthen departmental culture with a professional, positive work environment and faculty and staff aligned in pursuit of common goals.

Strategy 4.1.1: Streamline departmental operations to promote efficiency and integration.

Strategy 4.1.2: Strengthen and maintain consistent communication across all roles and units.

Strategy 4.1.3: Build a robust reward and recognition system for faculty, staff, and students.

Strategy 4.1.4: Organize regular social events to encourage informal interactions and relationship-building.

Our Priorities

To advance the Department of Grain Science and Industry in its vision of being a leader in meeting the needs of global food systems, the department has identified four priority areas. These areas are designed to advance the university's opportunity agenda in tackling global challenges through interdisciplinary collaboration in teaching, research, extension and engagement.

Human health and wellbeing: Innovations that impact overall health, longevity, and quality of life. **Innovative manufacturing technologies:** Advanced technologies and timely solutions that create value for stakeholders and consumers, and advance economic development.

Sustainable food systems: Responsive and integrated innovations that improve resiliency and efficiencies in the food value chain.

Animal health and food biosecurity: Feed innovations that transform animal health and performance.

Our Opportunity Initiatives

The Department of Grain Science and Industry is uniquely positioned to advance the agricultural industry and enhance collaboration through interdisciplinary research and development and industry partnerships. The strategic priorities support opportunity initiatives in specialized areas.

Human health and wellbeing: Innovations that impact overall health, longevity, and quality of life.

- *Molecular food science:* Adapt fundamental scientific principles to transform plant-based commodities and components into products that precisely target chronic disease prevention, and improve longevity and quality of life.
- *Food microbiome and gut health:* Develop integrated cross-disciplinary research in food chemistry and molecular microbiology, molecular nutrition, and biochemistry to advance human health through integrated microbiome research.
- *Food as medicine*: Lead discoveries that produce high visibility impacts in the food for health, precision nutrition, and food as medicine paradigms.

Innovative manufacturing technologies: Advanced technologies and timely solutions that create value for stakeholders and consumers, and advance economic development.

- *Biomanufacturing:* Develop leading-edge technologies in manufacturing, precision fermentation, and biotechnology to produce high-value products, solve problems relevant to stakeholders, and develop talent for future innovations.
- *Predictive analytics and smart data integration:* Smart innovations in the food space that exploit big data, fine-scale nutrient mapping, AI tools, and advanced information technology to improve food quality, safety, and nutrition.

Sustainable food systems: Responsive and integrated innovations that improve resiliency and efficiencies in the food value chain.

- *Bioconversion:* Lead innovations that capture unique value from grain and food manufacturing byproducts and waste streams, develop new ingredients and product solutions from plant commodities, and seek novel applications for underexploited resilient food crops.
- *Integrated systems:* Develop highly integrated cross-discipline food value chain systems that maximize resiliency and efficiency in the food production, manufacture, and marketing and distribution.
- *Cell based technologies:* Innovate using cellular agriculture technologies and biotechnology to produce novel food ingredients and nutrients.

Animal health and food biosecurity: Feed innovations that transform animal health and performance.

- *Feed processing biosecurity:* Foster cross-disciplinary research to secure the nation's food supply through system innovations that ensure feed biosecurity, biodefense, and safety.
- *Feed manufacturing technologies*: Lead the development of technologies that ensure feed and petfood products promote the health, longevity and/or performance of companion and farmed animals. Advance environmental sustainability of livestock production systems through feed efficiency.

Goals and Strategies	2027 Outcome Target	2030 Outcome Target
	l educational experiences for all learn ofessionals, and other non-degree see	
	try-relevant curriculum by regularly r and offerings, while integrating practi	
Strategy 1.1.1: Review and adapt the degree and program portfolio to include offerings to best serve students and the industry.	 Industry and department-informed curriculum review Revised curricula implemented Learning outcomes, enrollment trends, & other curriculum-relevant metrics 	 85% students achieve target learning outcomes Continuous improvement of curriculum 25% increase in student retention and graduation rates
Strategy 1.1.2: Review and adapt the content and delivery modes of the curriculum to align with emerging industry needs.	 10% Increase in IGP flexible, online, and hybrid course offerings Two-year online Associate Applied Science in food and feed manufacturing 	 One new IGP program area with online and hybrid delivery Continuous improvement of AAS curriculum
Strategy 1.1.3: Increase practical, applied learning opportunities (i.e., internships, research projects, international experiences, community engaged learning) for all students.	 Establish baseline and develop plan for 100% applied learning participation Support for students and industry partners through outcomes and connection to curriculum 	 100% participation by undergraduate students Best practices/guidance resources for students and industry partners
Goal 1.2: Improve recruitment, re	etention and engagement practice learner population.	es to support success of a diverse
Strategy 1.2.1: Increase the number of highly qualified graduates of undergraduate degree programs by improving enrollment, retention, and completion rates.	 Grow UG enrollment by 20% Increase first-year retention rate by 5% Increase four-year graduation rate by 5% 	 Increase UG enrollment by 50% Achieve 85% first-year retention rate Achieve 75% four-year graduation rate
Strategy 1.2.2: Enhance the reputation and national competitiveness of graduate programs.	 Increase GR enrollment by 15% Increase graduate faculty FTE by 20% GR stipends at 50th percentile of our peers Establish the baseline for GR students earning competitive national awards Establish the baseline for student research accepted by peer reviewed publications 	 Increase GR enrollment by 30% Increase GR applicant pool by 100% GR stipends above 85th percentile of peers Top 10 grain/food science program Increase GR student competitive national awards by 25% At least 20% of PhD graduates enter academia

Goals and Strategies	2027 Outcome Target	2030 Outcome Target
Goal 1.2: Improve recruitment, r	etention and engagement practice learner population.	es to support success of a diverso
Strategy 1.2.3: Identify and develop offerings for domestic and international industry professionals and other non-degree seeking learners.	Gap analysis with industry feedback	 Increase IGP course offerings by 10% for onsite delivery; 50% for distance delivery Reach at least 1000 industry professionals annually
Strategy 1.2.4: Provide student success programs and services that engage students and foster a supportive and inclusive environment.	 Assess and enhance student scholarships, awards/recognition, advising, and support Establish a mentorship program for UG students 	85% of GR and UG students report satisfaction with advising, mentoring, and support services
Strategy 1.2.5: Expand opportunities for graduate student engagement with scholarly research and industry-relevant experience.	30% of GR students present at least once at national/international conferences.	 50% of GR students present at least once at national/international conferences 50% of GR students complete internships 50% of GR students publish in peer reviewed publications 100% of Graduates secure competitive jobs within six months of graduation
Goal 2: Strengthen pos	ition as a global leader in addressi	ng industry challenges.
Goal 2.1: Enh	ance networking and stakeholder	engagement.
Strategy 2.1.1: Increase communication and collaboration with industry partners.	 Reinstitute the departmental external advisory board (EAB) EAB priority agenda and outcomes developed and member experience assessed annually Constitute a departmental Industry Relations Committee Grow corporate partnerships by 20% Establish metrics for revised departmental newsletter; grow readership by 20% 	 Demonstrate positive progress in priority agenda and outcomes. Industry Relations Committee presents actionable suggestions to department faculty and staff every six months Grow corporate giving by 50% Grow newsletter readership/engagement by 50%

Goals and Strategies	2027 Outcome Target	2030 Outcome Target
Goal 2.1: Enh	ance networking and stakeholder	engagement.
Strategy 2.1.2: Strengthen alumni network to promote lifelong connections and mutually beneficial interactions.	 At least 2 alumni and friends' activities at professional convenings annually Update alumni database and collect feedback through a biannual survey Baseline data for alumni participation; grow by 20% 	 Assess and adjust engagement plan Four regular networking events at professional meetings Grow alumni database by 50% Increase alumni participation by 50%
Goal 2.2: Expand partnerships a	nd outreach activities with extern challenges.	al stakeholders to solve industry
Strategy 2.2.2: Expand international engagements through collaborative research.	 Baseline projects with international component(s); associated funding Expand applied research projects with at least two opportunities with funding of \$500K 	 Integration of IGP with ongoing and proposed new projects with international components Grow applied international research projects with total funding of \$500K by 50%
Goal 3: Foster innovation and	research excellence as a global lea	ader in grain and food science.
Goal 3.1: Grow a	and align resources to support stra	ategic priorities.
Strategy 3.1.1: Align staffing and budget allocations to advance innovation in research strategic priority areas.	 Fill current open positions; identify other areas of expertise needed Budget allocation (Departmental GRA's) for the research faculty 	 Grow faculty FTE to effectively support departmental mission Retain faculty by supporting through internal systems (e.x, salaries, award, facilities, supportive work environment)
Strategy 3.1.2: Grow extramural funding to support research and outreach.	 Grow the funding to \$400K per FTE Identify opportunities for creating collaborative centers Support grant writing training opportunities for faculty 	 Grow external funding to \$500K per FTE Create at least one research center of excellence

Goals and Strategies	2027 Outcome Target	2030 Outcome Target
Goal 3.1: Grow and align resources to support strategic priorities.		
Strategy 3.1.3: Grow financial resources through strategic fundraising, including expanding private donations and developing new revenue streams.	 Work with EAB to identify opportunities for financial growth Set fundraising goals for GCGFI facilities & student scholarships Seek funding for BIVAP renovation to expand research capacity Identify opportunities for endowed chair/professorships 	 Increase available scholarships for students by 25% 70% of equipment needs for global center funded through external support Grow external IGP revenue by 50% 100% funding for BIVAP renovation secured At least two new endowed chair/professorships
Goal 3.2: Expand research collaborations with the industry, other K-State departments, and other universities to leverage interdisciplinary expertise and improve innovation.		
Strategy 3.2.1: Grow departmental research and scholarship to increase national reputation.	 Revamp departmental website Create a position to translate the departmental research activities to the public Increase number of international and national presentations by 10% Establish new competitive departmental seed grant 	 Fully functional and regularly updated departmental website Regular newsletters on research activities. Renovation of BIVAP to upgrade and increase research space by 50% complete 100% of core collaborative research equipment installed at GCGFI Secure resources to fund departmental seed grants at \$150K per year Increase research publications in high impact journals by 50%
Strategy 3.2.2: Strengthen the technology transfer pipeline to address current and emerging industry needs.	 Build resources to support technology transfer Identify collaborators to rent spaces in the new building Increment in number of patents and technology transfer research agreements 	 Increase on campus interdisciplinary collaborations with industry partners by 50% Increased technology transfer research agreements by 20%

Goals and Strategies	2027 Outcome Target	2030 Outcome Target
	borations with the industry, other ge interdisciplinary expertise and	
Strategy 3.2.3: Engage industry partners to define and collaborate on research to advance the industry.	 Provide opportunities for the faculty to meet with the external advisory board Invite the industry partners to the GSGSO graduate symposium Establish GSI industry relations committee 	 Two general meetings with the advisory board every year Position the GSGSO graduate symposium as a showcase of departmental research and industry advances
Strategy 3.2.4: Convene teams of interdisciplinary faculty to create innovative research collaborations in priority areas.	 Provide clear guidance on sharing the facilities in the GCGFI Provide clear guidance for newly hired faculty on the expectations of participating in interdisciplinary collaborative projects 	 Well-equipped interdisciplinary research labs Budget models for the interdisciplinary research labs
Goal 3.3: Build state-of-the-art	facilities to support innovation an discovery.	d interdisciplinary research and
Strategy 3.3.1: Continue to increase investment in upgrading facilities and research capabilities, particularly core and collaborative labs and research spaces.	 Investment in new core research equipment, \$750K Initiate BIVAP remodeling Identify replacement for fabrication and maintenance facilities 	 Fully functional interdisciplinary research labs Investment in new core research equipment, \$2.5M Increase research capacity at BIVAP by 50% through renovation
Strategy 3.3.2: Plan for the utilization of new spaces and resources to align with the department's research priority areas and anticipated growth.	 Invest in hiring a research manager/research technician for the interdisciplinary research labs Fund research technician through the interdisciplinary research lab Pl's 	 A self-sufficient revenue system for the interdisciplinary research labs At least \$500K in external funding per FTE annually Growth in external grants funding by 50%

Goals and Strategies	2027 Outcome Target	2030 Outcome Target
Goal 4: Create an agile and cha	ange-ready culture to support inno	ovation and growth initiatives.
	ental culture with a professional, p nd staff aligned in pursuit of comm	
Strategy 4.1.1: Streamline departmental operations to promote efficiency and integration.	 Reduce administrative redundancies by 20% Conduct a "climate survey" annually; achieve a satisfaction level of 75% or higher 	 Achieve a 30% reduction in administrative redundancies Raise satisfaction rates to 85% or higher
Strategy 4.1.2: Strengthen and maintain consistent communication across all roles and units.	 Establish a monthly departmental newsletter Hold a "state of the department" meeting each semester; least 75% participation. 	 Measure departmental newsletter success through 14% open rate and high satisfaction ratings for content relevance. Achieve 90% participation in bi-annual meetings.
Strategy 4.1.3: Build a robust reward and recognition system for faculty, staff, and students.	Annual formal recognition program with yearly awards for faculty, staff, and students based on peer nominations, with 80% participation in the nomination process	 Maintain 80% participation in peer nominations process for recognition program. At least 5 external award nominations for faculty, staff and students every year.
Strategy 4.1.4: Organize regular social events to encourage informal interactions and relationship-building.	Host at least one social or team- building event per semester; at least 60% faculty/staff participation, and positive evaluation feedback	 Host two social or team-building events per semester with 75% participation Achieve 90% positive feedback survey

Alignment with University Imperatives

Goal 1: Deliver highly impactful educational experiences for all learners – undergraduate, graduate, industry professionals, and other non-degree seeking adults.

Imperative 1	Grow enrollment to 30,000 total learners
Imperative 2	Improve retention and graduation rates for all student populations
Imperative 3	Provide every degree-seeking student with applied learning experiences
Imperative 5	Nimbly and proactively meet the needs of learners, employers and society

Goal 2: Strengthen position as a global leader in addressing industry challenges.

Imperative 4	Grow research expenditures to \$300 million annually and sponsored programs and
	awards to \$270 million annually
Imperative 5	Nimbly and proactively meet the needs of learners, employers and society
Imperative 6	Build partnerships at all levels of K-State
Imperative 7	Be a positive force for the Kansas economy
Imperative 9	Become an employer of choice in Kansas and higher education

Goal 3: Foster innovation and research excellence as a global leader in grain science and industry.

Imperative 4	Grow research expenditures to \$300 million annually and sponsored programs and
	awards to \$270 million annually
Imperative 6	Build partnerships at all levels of K-State
Imperative 7	Be a positive force for the Kansas economy
Imperative 9	Become an employer of choice in Kansas and higher education
Imperative 10	Grow total, combined fundraising to \$2 billion by 2030

Goal 4: Create an agile and change-ready culture to support innovation and growth initiatives.

Imperative 8	Focus on operational excellence and being One K-State in all we do
Imperative 9	Become an employer of choice in Kansas and higher education







