


**At the Start of our Second Century...  
making progress and measuring success!**

**GSI State of the Department Seminar  
Manhattan, Kansas  
April 5, 2012**

*Presented by:*  
**Dr. Dirk E. Maier**  
Professor and Head  
Grain Science & Industry





***THANK YOU!!!***

# Feedback from 2011 GSI Climate Survey...

“Overall, the results were encouraging. When asked about departmental climate factors such as collegiality, quality, and morale, most respondents ranked these factors as either exceptional or very good.

Specifically, 77.6% and 73.6% of respondents agreed that the quality of undergraduate programs and graduate program, respectively, was exceptional or very good.”

*- From 2011 Departmental Climate Survey*

Technical Magazine for the Milling Industry

# MILLING

J o u r n a l

**IAOM 116th Annual Conference & Expo**

**Spokane Convention Center**

**May 7-11 • Spokane, WA • Page 8**

**BRAND VALUE!!!**

MILLING JOURNAL  
3065 Pershing Ct.  
Decatur, IL 62526

CHANGE SERVICE  
REQUESTED

- 4** | IAOM Status Report: Melinda Farris
- 32** | Profile on Siemer Milling's Richard Siemer
- 36** | Aerosols for Managing Insects
- 42** | Ozone Status Report
- 46** | Mark Fowler: Monitoring the Mill to Improve Performance

Volume 20 Issue 1    **First Quarter 2012**

**KANSAS STATE**  
UNIVERSITY

Department of Grain Science  
and Industry





# Why I remain Excited about the Department of Grain Science & Industry!!!

## Three Reasons:

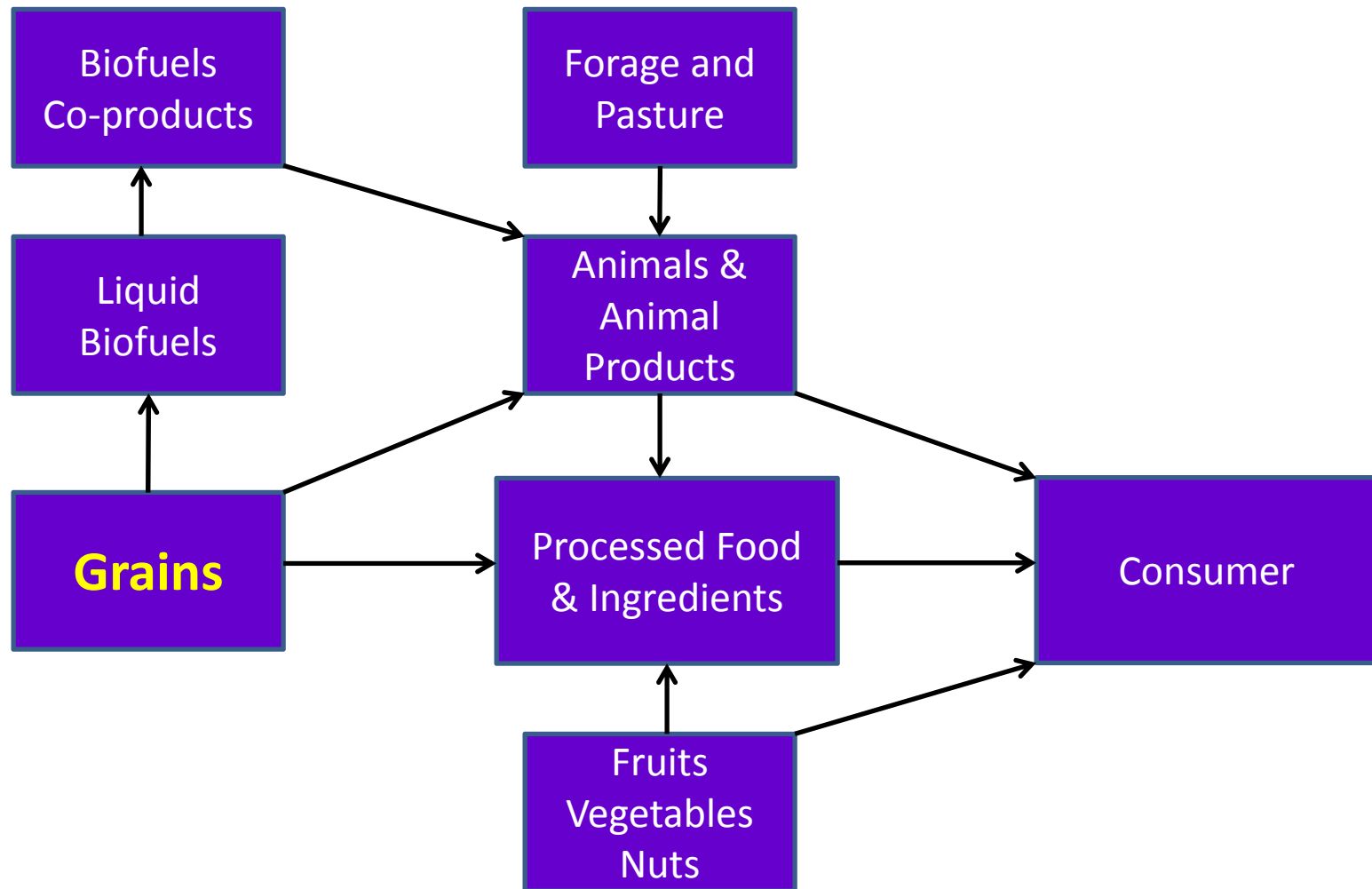
1. Great faculty & staff!
2. Great students!
3. Great career opportunities!

# Vision for K-State's Grain Science & Industry Department



*"The **global** education, research and technology transfer **leader** for the grain & plant-based food, feed, fiber, fuel and bio-products supply chains."*

# Consumer Food System



Adapted from Dr. Gary Pierzynski





**Danger** and **Opportunity**



# New K-State Administration



Dr. Kirk Schulz  
President



Dr. April Mason  
Provost &  
Senior Vice President

## Others:

New Deans (Business, Arts & Sciences, Education,  
Agriculture, Salina)

New COA DHs (Entomology)

New Graduate School Associate Dean

New Vice Provost for Undergraduate Studies

Interim Associate Provost for International Programs

New Director for Corporate Engagement

New Men's Basketball Coach (Bruce Weber)

Dr. John Floros  
Incoming COA Dean &  
KSRE Director





# K-State 2025

KANSAS STATE UNIVERSITY SUMMARY VISIONARY PLAN

# Comments from Provost Mason...

“The Strategic Plan will translate into an operational plan which will relate to budgeting and evaluation.”

1. Resource what works
2. Improve institutional systems and processes
3. Provide incentives for the actions needed to reach our vision
4. Capitalize on the strengths we have across the university by using cross-campus teams to implement priority concepts in integrated approaches



**“Good is the enemy of great!”**

**- Jim Collins**



# Good to Great...

- Transformation of an organization from good to great is a process of **build up** followed by **break-through**, broken into three broad stages:
  - Disciplined people (*who*)
  - Disciplined thought (*what*)
  - Disciplined action (*how*)

# Disciplined People...

- First Who then What
  - Full contingent of the right **faculty** expertise
  - Optimum mix of support **staff** expertise & experience
  - Undergraduate and graduate **students** with whom we can partner to successfully complete their BS, MS and PhD degrees
  - Committed **stakeholders** who support us through thick and thin
- ➔ Focus on having the right people on the bus and in the right seats

# *ONE Faculty Team!!!*



*KSU Grain Science & Industry Faculty  
August 2011*

**KANSAS STATE**  
UNIVERSITY

Department of Grain Science  
and Industry

# Newest Team Members



Dr. Kingsly Ambrose  
Assistant Professor



Fran Churchill  
NAMA Instructor of  
Milling Science &  
Management

Cassandra Jones  
Assistant Professor



Dr. Greg Aldrich  
Research Associate  
Professor

Carlos Campabadal  
IGP Outreach Specialist  
& Instructor





# 2011 Faculty Recognitions

- Yong-Cheng Shi – Promotion to full Professor
- Fred Fairchild – Gamma Sigma Delta Distinguished Faculty Award
- Dirk Maier – GEAPS Industry Leader Award
  - 2<sup>nd</sup> in history of our department (Schoeff)
- Xiuzhi Susan Sun – University Distinguished Professor
  - 1<sup>st</sup> in history of our department
- Xiuzhi Susan Sun – Higuchi-KU Endowment Research Achievement – Irvin Youngberg Award for Applied Sciences
  - 3<sup>rd</sup> in history of our department (Hoseney, Seib)
- Ron Madl – KSRE Builder Award
- Jon Faubion – 2011 AACCC International Excellence in Teaching Award
  - 4<sup>th</sup> in history of our department (Hoseney, Seib, Rogers)
- Subi Bhadriraju – Donald A. Wilbur Endowed Professor
  - 1<sup>st</sup> in Stored Product Protection

# *Outstanding Support Staff!!!*



*KSU Grain Science & Industry Staff  
Fall 2011*



## 2012 Students, Staff & Faculty Recognitions

- *Pls come and join us for the...*
- ➔ **Scholarship and Awards Banquet** April 25, 2012 at 6:30p at IGP Conference Center

## 2012 Alumni & Friends Recognitions

- *Pls come and join us for the...*
- ➔ **Outstanding Alumni & Service Awards Luncheon** April 25, 2012 at 11:00a at IGP Conference Center

# Disciplined Thought...

- Confront the Brutal Facts
  - Lack of financial discipline
  - Indebtedness and spending beyond our means
  - Living off our past glory
  - Taking stakeholder support for granted
  - Neglecting our teaching mission
  - Failing and antiquated facilities (incl labs, classrooms)
- ➔ Identifying and acknowledging our weaknesses and threats to our future success
- ➔ some of this is part of our 2025 discussion!



# Disciplined Thought...

- Hedgehog Concept
  - See updated vision and mission statements
  - See our top initial priorities
  - See our Strategic Plan
- ➔ Being the best we can be at what we are best at in the world
- ➔ Being deeply passionate about what we do
- ➔ Building on our strengths; taking advantage of new opportunities

Do we have a clear vision of how our future will be different from our past?

Do we have an effective strategy to make that future a reality?

Do we have a real sense of urgency to grab our opportunities?



TEAMWORK

***“The real power of teamwork is achieving more than individuals could ever imagine doing alone.”***

**- Adapted from The Five Dysfunctions of a Team**

# Mission of K-State's Grain Science & Industry Department

*"To educate students and professionals, conduct innovative research, transfer new technologies and knowledge, offer high-quality outreach programs and services that **impact** the global grain & plant-based food, feed, fiber, fuel and bio-products supply chains."*

# Initial / Continued Priorities

- **Grow our student enrollment**
- **Grow our research enterprise**
- **Grow our outreach efforts**



# Strategic Plan Themes

1. Educate undergraduate and graduate students, and industry professionals.
2. Conduct innovative basic and applied research, and transfer new technology and knowledge to end users.
3. Offer high-quality outreach programs and services to meet domestic and international customer needs and stakeholder expectations.
4. Recruit, retain, reward and develop high quality faculty, and professional and classified staff.
5. Develop, maintain and utilize state-of-the-art facilities and equipment.
6. Broaden funding base and improve financial stewardship.

➔ Department strategic plans have to align with K-State Visionary Plan by early of 2013!

# KSU 2025 Initiative – Metrics

1. total research and development expenditures
2. total endowment
3. number of national academy members
4. number of faculty awards
5. number of doctorates granted annually
6. freshman-to-sophomore retention rate
7. six-year graduation rate, and
8. percent of undergraduate students involved in research

**→ Our department strategic plan has to have its own metrics that support the metrics of the COA/KSRE and K-State strategic plans!**

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***“Preparing the Next Generation of Professionals  
for the Global Grain-based Food & Feed Industry”***



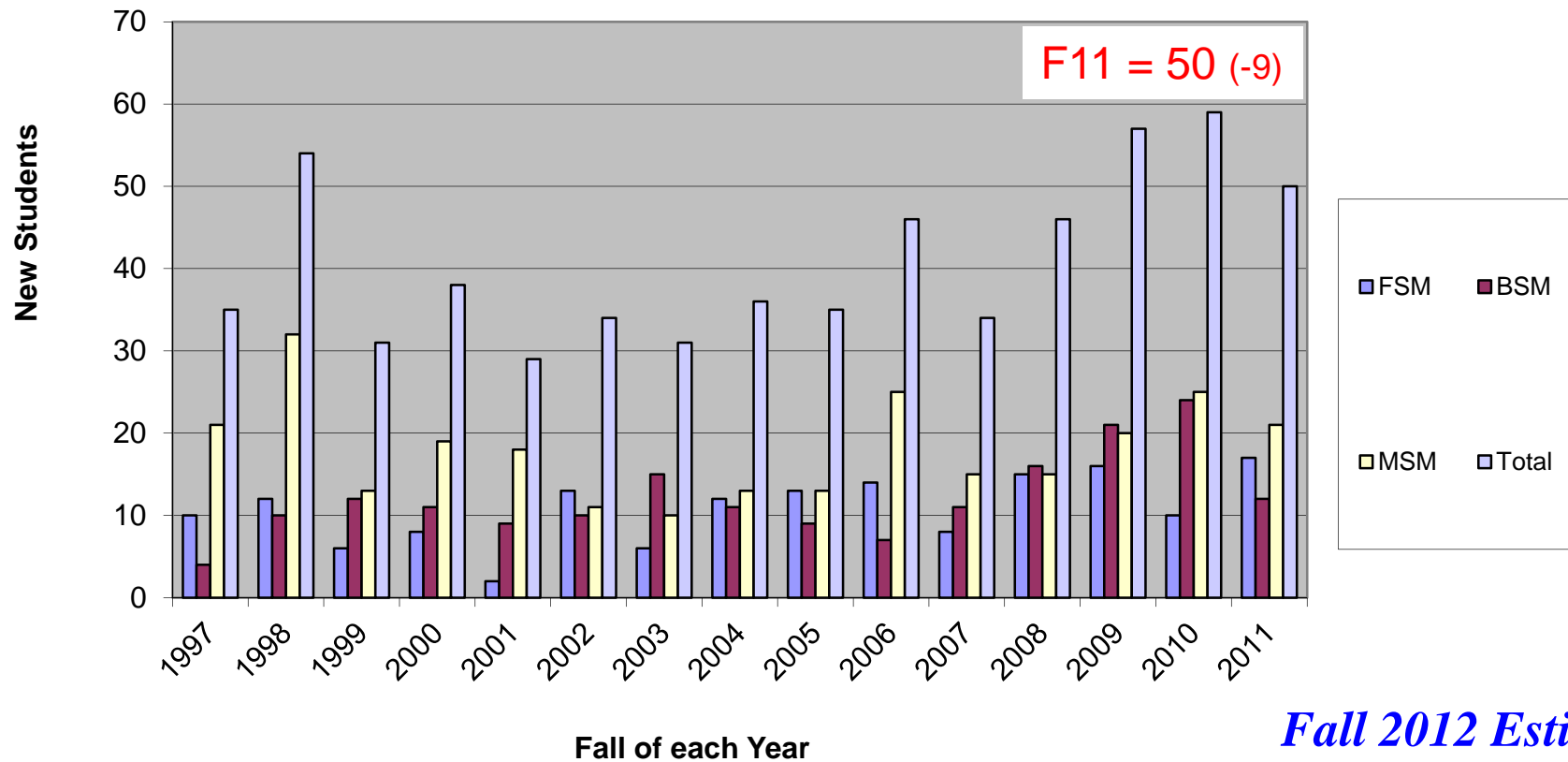
# Undergraduate Program Metric 1 – Enrollment

Undergraduate student enrollment and gender diversity in the Department of Grain Science & Industry's three B.S. degree programs (2007-2011).

<i><b>Year</b></i>	<i><b>FSM</b></i>	<i><b>BSM</b></i>	<i><b>MSM</b></i>	<i><b>Total</b></i>	<i><b>5-yr Avg</b></i>	<i><b>Male (%)</b></i>	<i><b>Female (%)</b></i>
Fall 2007	31	33	79	143	136	62.2	37.8
Fall 2008	41	45	83	169	144	58.6	42.6
Fall 2009	39	63	82	184	156	59.2	40.8
Fall 2010	43	71	92	206	171	57.3	42.7
Fall 2011	46	67	91	204	181	58.3	41.7

➔ ***What are our targets?***

## New Student Enrollment - Fall 1997-2011



***Fall 2012 Estimate:***

***27 (+3) BSM***

***18 (+2) MSM***

***17 (+3) FSM***

***62 (+8) Total***

## Undergraduate Program Metric 2 – Retention

Retention of undergraduate students entering KSU and enrolling in one of the Department of Grain Science & Industry's three B.S. degree programs (2008-2010).

<i>Fall New Full-time Freshmen Enrollment</i>			<i>Leaving KSU by next Fall</i>		<i>Continuing in GSI</i>		<i>Continuing in COA</i>		<i>Continuing in other College</i>	
2008	2009	33	3	9.1%	22	66.7%	7	21.2%	1	3.0%
	2010	33	6	18.2%	17	51.5%	8	24.2%	2	6.1%
	2011	33	7	21.2%	16	48.5%	7	21.2%	3	9.1%
2009	2010	41	6	14.6%	20	48.8%	6	14.6%	9	22.0%
	2011	41	8	19.5%	18	43.9%	6	14.6%	9	22.0%
2010	2011	45	5	11.1%	27	60.0%	4	8.9%	9	20.0%

➔ **What are our targets?**

# Undergraduate Program Metric 3 – Graduating Seniors

Graduating Seniors from the Department of Grain Science & Industry's three B.S. degree programs (2007-2011).

	<i>Fall</i>			<i>Spring</i>			<i>Total</i>				
<i>Year</i>	<i>BSM</i>	<i>FSM</i>	<i>MSM</i>	<i>BSM</i>	<i>FSM</i>	<i>MSM</i>	<i>BSM</i>	<i>FSM</i>	<i>MSM</i>	<i>Total</i>	<i>5-Yr Avg</i>
2007	0	2	4	7	4	9	7	6	13	26	26
2008	2	2	10	4	3	10	6	5	20	31	27
2009	2	0	1	2	6	10	4	6	10	21	25
2010	0	1	5	6	5	12	5	5	16	29	28
2011	7	7	7	4	6	12	11	13	18	43	30

➔ *What are our targets?*



# Undergraduate Program Metric 4 – Placement

## Job Offer Statistics by Undergraduate Major

Major	Graduates	Employed	Total Reporting	High Salary	Average Salary	vs prior year
AGBUS	53	93%	28	\$55,000	\$37,882	\$36,383 (+4.1%)
AGRON	30	70%	16	\$55,000	\$41,522	\$40,387 (+2.8%)
ASI	166	59%	52	\$70,000	\$34,256	\$29,133 (+17.5%)
<b>BSM</b>	<b>5</b>	<b>100%</b>	<b>3</b>	<b>\$60,000</b>	<b>\$52,667</b>	<b>\$51,500 (+2.3%)</b>
FDSI	30	63%	10	\$70,000	\$42,332	\$42,754 (-0.99%)
<b>FSM</b>	<b>8</b>	<b>86%</b>	<b>4</b>	<b>\$67,000</b>	<b>\$46,250</b>	<b>\$44,333 (+4.3%)</b>
HRT	40	89%	20	\$47,000	\$28,876	\$27,151 (+6.4%)
<b>MSM</b>	<b>17</b>	<b>94%</b>	<b>7</b>	<b>\$60,000</b>	<b>\$55,500</b>	<b>\$53,188 (+4.3%)</b>

Information from Career and Employment Services (8/10, 12/10, 5/11; 2011)

# Undergraduate Program Metric 4 – Placement

## Companies and Job Titles

- American Italian Pasta Company
- ADM Milling
- Bartlett Grain Company
- Bay State Milling Company
- Bimbo Bakeries USA
- Bunge
- Cargill Horizon Milling
- ConAgra Foods
- Del Monte Foods
- Flowers Foods
- General Mills
- Mennel Milling Company
- New Cooperative Inc
- Nutro Company
- PepsiCo / Frito-Lay / Quaker Foods
- Viterro
- Assistant Manager
- Associate Head Miller
- Farmer/Rancher
- Front Line Leader
- Management Trainee
- Manufacturing Engineer Associate
- Milling Assistant
- Milling Associate
- Milling Manager Trainee
- Operations Intern
- Process Engineer
- Production Supervisor
- Quality Control Supervisor
- Quality Systems Coordinator
- Supervisor

Information from Career and Employment Services (8/10, 12/10, 5/11; 2011)



## Students becoming Professionals...

**KANSAS STATE**  
UNIVERSITY

Department of Grain Science  
and Industry





# Graduate Program



***“Preparing the Next Generation of Researchers and Innovators for the Global Grain-based Food, Feed & BioProducts Industry”***



# Graduate Program Metric 1 – Enrollment

Graduate student enrollment and multi-cultural domestic (URM) students in the Department of Grain Science & Industry's M.S. and Ph.D. degree programs (2007-2011).

<i><b>Year</b></i>	<i><b>M.S.</b></i>	<i><b>Ph.D.</b></i>	<i><b>Totals</b></i>	<i><b>5-Yr Avg</b></i>	<i><b>URM</b></i>	<i><b>URM (%)</b></i>
Fall 2007	23	23	46	31	1	6.7%
Fall 2008	24	20	44	34	2	12.5%
Fall 2009	27	26	53	40	3	13.6%
Fall 2010	27	28	55	47	3	15.8%
Fall 2011	27	21	48	49	3	13.0%

➔ ***What are our targets?***

# Graduate Program Metric 1 – Enrollment

Graduate student enrollment by degree, nationality and gender in the Department of Grain Science & Industry's M.S. and Ph.D. degree programs (2007-2011).

<i><b>Year</b></i>	<i><b>M.S. (%)</b></i>	<i><b>Ph.D. (%)</b></i>	<i><b>Domestic (%)</b></i>	<i><b>International (%)</b></i>	<i><b>Male (%)</b></i>	<i><b>Female (%)</b></i>
Fall 2007	60.9%	39.1%	32.6%	67.4%	50.0%	50.0%
Fall 2008	56.8%	43.2%	36.4%	63.6%	54.5%	45.5%
Fall 2009	50.9%	50.9%	41.5%	60.4%	50.9%	49.1%
Fall 2010	45.5%	54.5%	34.5%	65.5%	49.1%	50.9%
Fall 2011	50.0%	50.0%	47.9%	52.1%	56.3%	43.8%

➔ ***What are our targets?***

## Graduate Program Metric 2 – Graduates

M.S. and Ph.D. graduates from the Department of Grain Science & Industry's graduate degree programs (2007-2011).

<i><b>Year</b></i>	<i><b>M.S.</b></i>	<i><b>Ph.D.</b></i>	<i><b>Totals</b></i>	<i><b>5-Yr Avg</b></i>	<i><b>URM</b></i>	<i><b>Domestic PhD</b></i>
2007	7	2	9	7	0	0
2008	11	2	13	9	0	0
2009	6	3	9	8	1	1
2010	8	2	10	10	0	0
2011	5	7	12	11	1	0

➔ ***What are our targets?***

## Graduate Program Metric 3 – Publications

M.S. and Ph.D. graduate student publications from theses and dissertations in the Department of Grain Science & Industry's graduate degree programs (2007-2011).

<i>Year</i>	<i>M.S.</i>	<i>Peer Articles</i>	<i>Ph.D.</i>	<i>Peer Articles</i>	<i>Total Graduates</i>	<i>Total Articles</i>
2007	7	10	2	2	9	12
2008	11	8	2	0	13	8
2009	7	10	3	9	10	19
2010	7	2	2	6	9	8
2011	5	1	8	23	13	24
<b><i>Totals</i></b>	<b><i>37</i></b>	<b><i>31</i></b>	<b><i>18</i></b>	<b><i>40</i></b>	<b><i>55</i></b>	<b><i>71</i></b>

➔ ***What are our targets?***

# Graduate Program Metric 4 – Placement

## Companies and Job Titles (2007-2011)

- AIB International
- Bartlett Grain Co
- Cargill Horizon Milling
- Intl. Meat Processing Co (Canada)
- JR Short Co
- Kemin Industries
- Kerry Ingredients
- Kraft Foods
- Maine General Hospital
- Nestle
- Pepsico / Frito Lay /Quaker
- Schwan's
- Food Scientist
- Miller
- Product Developer
- Project Manager
- Quality Assurance Supervisor
- Researcher
- Research Manager
- R&D Senior Scientist
- Scientist

Information from Department Exit Interviews (2007-2011)



# Graduate Program Metric 4 – Placement

## Academic Institutions and Job Titles (2007-2011)

- Hyejeon College (Korea)
- Kansas State University
- KU Leuven (Belgium)
- Michigan State University
- North Carolina State University
- UC Davis
- Instructor
- Graduate Student
- Post-doctoral Researcher

Information from Department Exit Interviews (2007-2011)

# New Graduate Fellowship

- **Dr. C.E. Walker International Graduate Fellowship:**

- 2 x \$25,000 stipends (incl tuition waiver)

- **Purpose:**

- To honor Dr. Chuck Walker for his dedication to helping international students, and to provide financial assistance to an international graduate student enrolled in the Grain Science graduate program
- Established by TCMCO Inc., Lincoln, NE in 2010; quasi-endowed in 2011

- **Eligibility:**

- Must be an international graduate student enrolled in Grain Science at the M.S. or Ph.D. level
- Graduate Research Assistantship in baking science and technology; rheology applied to cereal grains or their products; or cereal chemistry related to baking
- M.S. limited to 24 months; Ph.D. limited to 36 months



# Strategic Plan Themes

1. Educate undergraduate and graduate students, and industry professionals.
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5. Develop, maintain and utilize state-of-the-art facilities and equipment.
6. Broaden funding base and improve financial stewardship.

# Research Program Metric 1 – Grants & Contracts

Grant and contract totals, awards received and proposals (some data missing) submitted as reported by the KSU Office of the Vice President for Research for the Department of Grain Science & Industry (2007-2011) and 2012 through December 31. Award yield was calculated.

<i><b>Fiscal Year</b></i>	<i><b>Grants Totals</b></i>	<i><b>5-yr Average</b></i>	<i><b>Awards Received</b></i>	<i><b>Average Award</b></i>	<i><b>Proposals submitted</b></i>	<i><b>Proposal Total</b></i>	<i><b>Award Yield</b></i>
2007	\$2,058,140	\$2,121,885	24	\$85,756	--	--	--
2008	\$1,408,563	\$1,826,982	31	\$45,437	--	--	--
2009	\$3,396,240	\$2,010,975	36	\$94,340	57	\$12,691,089	26.7%
2010	\$1,582,167	\$2,251,729	35	\$45,205	53	\$7,463,093	21.2%
2011	\$1,376,246	\$1,964,271	29	\$47,457	58	\$15,081,893	9.1%
2012	\$1,192,225	--	21	--	34	\$3,724,242	--

➔ ***What are our targets?***

# Extramural Funding Support

	2005	2006	2007	2008	2009	2010	2011	2012	5yr Avg
HORT	\$325,671	\$387,539	\$633,383	\$1,046,426	\$1,082,763	\$514,216	\$368,293	\$543,000	\$729,016
<b>GSI</b>	<b>\$815,578</b>	<b>\$2,376,352</b>	<b>\$2,058,140</b>	<b>\$1,408,563</b>	<b>\$3,396,240</b>	<b>\$1,582,167</b>	<b>\$1,376,246</b>	<b>\$1,293,833</b>	<b>\$1,964,271</b>
ENTM	\$1,507,496	\$2,784,940	\$2,848,309	\$2,075,416	\$1,560,774	\$1,898,520	\$2,347,047	\$543,395	\$2,031,801
AGEC	\$1,773,947	\$2,028,162	\$2,292,428	\$2,529,003	\$1,350,847	\$2,408,959	\$2,179,162	\$1,656,140	\$2,152,080
ASI	\$1,568,014	\$1,707,054	\$2,988,255	\$2,855,594	\$1,882,156	\$1,327,458	\$2,019,348	\$320,262	\$2,328,775
AGRY	\$3,069,983	\$3,732,199	\$7,031,838	\$3,402,577	\$4,892,905	\$6,779,713	\$4,911,685	\$4,056,376	\$5,403,744
PP	\$4,105,332	\$4,214,156	\$5,343,061	\$3,714,770	\$7,607,972	\$6,754,886	\$5,449,762	\$3,526,882	\$5,774,090
COA totals	\$15,413,931	\$20,599,579	\$25,515,848	\$19,324,431	\$24,476,049	\$24,522,693	\$21,187,744	\$11,030,028	\$23,005,353

*Note: 5-yr avg is for FY 2007-11; 2012 is through 1/31/12*

**GSI faculty & staff generated about  
\$10 million in extramural support  
during the past 5 years!**



## Comment from Interim Dean Pierzynski...

“I encourage you to work on **increasing extramural funding** for the department’s research activities. The COA and KSRE have **substantial investments** in infrastructure for GSI and I believe there is unrealized potential for extramural funding, particularly when the **new feed mill** is operational.”

*- From 2011 Annual DH Evaluation*

## Research Program Metric 3 – Peer Journal Manuscripts

	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011*</b>	<b>5-yr Avg</b>
<b>Asst Profs</b>	8	12	6	10	9	<b>9</b>
<b>Assoc Profs</b>	0	2	9	7	8	<b>5</b>
<b>Full Profs</b>	20	24	21	35	26	<b>25</b>
<b>Total</b>	<b>28</b>	<b>38</b>	<b>36</b>	<b>52</b>	<b>43</b>	<b>39</b>

\*published that year so far

**GSI faculty published 197 peer manuscripts in the past 5 years!**

## Research Program Metric 3 – Disclosures & Patents

	2006	2007	2008	2009	2010	2011	5-yr Avg
ASI	4	2 (1)	5	1	2	1	2.3
GSI	5	3	5	4	4	4 (1)	4.0
ENTM		1			1	1	0.6
AGRY	3	1	6	1		2	2.0
PP		1	1	2			0.8
Other	1		5		1	1	1.4
COA Total	13	8	22	8	8	11	11.4
KSU Total	43 (4)	34 (1)	47	24	24	31 (3)	32.0

(#) denotes issued U.S. patents from disclosures

**GSI faculty filed 21 disclosures and had 1 patent issued in the past 5 years!**

# Research Program Metric 4 – Undergraduate Research

## GSI Students, Projects & Advisors

- [Timothy Becker](#), MSM Senior, *“Physicochemical Properties of Freshwater Macro- and Microalgae Protein and Oil Compared with Soybean Protein and Oil Products”*, co-author with Dr. Sun
- [April Hostetler](#), MSM Junior, *Functional and Compositional Properties of Reduction and Break Flour Fractions*, Dr. Dogan
- [Westley Hutson](#), FSM Junior, *Effect of fat source on pellet quality*, Dr. McKinney
- [Juhui Jeong](#), BSM Senior, *“Effect of resistant starch on extruded ready-to-eat breakfast cereal quality”*, co-author with Dr. R. Miller
- [Shauna Muehlbach](#), FSM Junior, *Effectiveness of pellet binders*, Dr. McKinney
- [Mayra Perez](#), BSM Freshman & Developing Scholars Program, *Milling and end product characterization*, Dr. Dogan
- [Cole Rickabaugh](#), FSM Junior, *Effectiveness of pellet binders*, Dr. McKinney
- [Bethany Vosburgh](#), BSM Senior & NSF REU summer student, *Cyanophycin biosynthesis from renewable resources*, Dr. Vadlani
- [Caleb Wurth](#), FSM Junior & Developing Scholars Program, *Mold inhibitors in aquaculture feed*, Dr. McKinney
- [Nathan Watson](#), MSM Senior & IAOM Student Presenter, *Method for predicting roll wear through sieve analysis*, Prof. C. Miller

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# International Grains Program

## Our Mission

*To provide **innovative** and **relevant** education and technical programs to enhance the market preference, consumption and utilization of U.S. cereal grains, oilseeds and their value added products for the **global grain industry**.*

# Outreach Program Metric 1 – Professionals Trained via IGP

Number of industry professionals, short courses and countries organized by the department's International Grains Program (2007-2011).

<i>Year</i>	<i>Flour Milling &amp; Grain Processing</i>	<i>Grain Marketing &amp; Risk Management</i>	<i>Feed Manufacturing &amp; Grain Management</i>	<i>Total Participants</i>	<i>Number of Short Courses</i>	<i>Number of Countries</i>
2007	82	78	82	242	17	28
2008	77	87	27	191	18	27
2009	176	131	171	478	25	51
2010	85	284	76	445	27	43
2011	145	109	374	628	44	43
<b>Totals</b>	<b>565</b>	<b>689</b>	<b>730</b>	<b>1,984</b>	<b>131</b>	<b>--</b>

➔ ***What are our targets?***

## Outreach Program Metric 2 – Professionals Trained via DE

Number of industry professionals taking the department's distance education courses in partnership with grain (GEAPS), feed (AFIA) and milling (IAOM) industry organizations (2008-2011).

<b>Year</b>	<b>GEAPS Participants – Courses - Countries</b>			<b>AFIA Participants – Courses - Countries</b>			<b>IAOM Participants – Courses - Countries</b>		
2008	139	5	8	-	-	-	-	-	-
2009	258	7	5	-	-	-	-	-	-
2010	273	9	5	22	1	4	20	2	6
2011	344	12	4	60	1	5	180	4	4
<b>Totals</b>	<b>1014</b>	<b>40</b>	<b>22</b>	<b>82</b>	<b>2</b>	<b>9</b>	<b>200</b>	<b>6</b>	<b>10</b>

➔ **What are our targets?**

# ICGOP

*The primary education and applied research partner to the global grain handling and commodity utilization industry.*

## International Center for Grain Industry Operations and Processing

### A Path into the Future

In a time of rapid change, it's time to focus on how to meet the demands of a global industry in need of education and training.



# Strategic Plan Themes

1. Educate undergraduate and graduate students, and industry professionals.
2. Conduct innovative basic and applied research, and transfer new technology and knowledge to end users.
3. Offer high-quality outreach programs and services to meet domestic and international customer needs and stakeholder expectations.
4. Recruit, retain, reward and develop high quality faculty, and professional and classified staff.
5. Develop, maintain and utilize state-of-the-art facilities and equipment.
6. Broaden funding base and improve financial stewardship.



# Milling & Grain Processing (10)



**Mr. Quenten Allen**

**Dr. Kingsly Ambrose**

**Dr. Subramanyam Bhadriraju**

**Ms. Fran Churchill**

**Mr. Royal Denning**

**Dr. Hulya Dogan**

**Prof. Huseyin Dogan**

**Mr. Mark Fowler**

**Prof. Chris Miller**

**New Buhler Instructor (TBD)**

# Feed Technology & Grain Operations (10)

**Dr. Sajid Alavi**

**Dr. Greg Aldrich**

**Mr. Carlos Campabadal**

**Prof. Fred Fairchild**

**Ms. Cassandra Jones**

**Dr. Leland McKinney**

**Dr. Dirk Maier**

**Mr. Jay O'Neil**

**Prepare for vice-Behnke/McKinney position**

**Explore Feed Safety Research Assistant Professor**



**KANSAS STATE**  
UNIVERSITY

Department of Grain Science  
and Industry

Feed Manufacturing, Ration Formulation, Extrusion, Petfoods,  
Aquafeeds, Process Efficiency, Quality Preservation, Stored  
Product Protection, Grain Operations & Marketing, Biorefinery  
Operation, Feed Safety & BioSecurity

# Cereal & Bakery Sciences (7)

**Dr. Jon Faubion**

**Prof. Dave Krishock**

**Dr. Rebecca Miller**

**Mr. Michael Moore**

**Dr. Yong-Cheng Shi**

**Dr. David Wetzel**

**Prepare for vice-Madl  
position**





# Biobased Products & Bioenergy (2)

**Dr. X. Susan Sun**

**Dr. Ron Madl**

**Dr. Praveen Vadlani**

**Prepare for shift of vice-Madl position**



# Strategic Plan Themes

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3. Offer high-quality outreach programs and services to meet domestic and international customer needs and stakeholder expectations.
4. Recruit, retain, reward and develop high quality faculty, and professional and classified staff.
5. **Develop, maintain and utilize state-of-the-art facilities and equipment.**
6. Broaden funding base and improve financial stewardship.



# Shellenberger Hall Consolidation Considerations

- Complete classroom renovations (301, 311)
- Convert old locker room into Women's restroom (114B)
- Convert old Specialty Mill into Materials Handling Lab
  - Move/acquire needed specialty equipment to Hal Ross Mill
  - New lab for new Milling/Grain processing faculty
- ***Shut down & dismantle old flour mill***
  - Move some older equipment to Hal Ross Mill
  - Convert 4 cleaning house floors into faculty, post-doc & graduate student offices
  - Convert 4 mill floors mostly to laboratories
- Reclaim SH319 as useable lab space
- Abandon old Feed Technology building & offices
  - Move to new Feed Mill and some offices into BIVAP
  - Keep warehouse and shop space for dept use

➔ **Facilities Committee developing recommendations!**



# GSI North Complex on Kimball Ave



# O.H. Kruse Feed Technology Innovation Center

- Teaching, research, service facility
- \$12.3 million GMP for Phase I
  - \$2.3 million Kruse gift and other cash
  - \$1.5 from KBA Matching Grant
  - \$5.8 million in NBAF relocation funds from State of Kansas and Kansas State University
  - \$2.7 million from COA Ag Experiment Station
- Need to pay ~\$400k for discounted equipment
  - ~\$2 million equipment donations & discounts
- Seeking additional \$0.5 million cash from grain and feed industry to build grain handling and storage facility
- Phase II: Seeking additional funds and equipment from domestic and international grain, feed, petfood and animal nutrition industry and allied trades to complete Science & Education wing



## Project Timeline:

Fall 2011 – secure Phase 1 funds

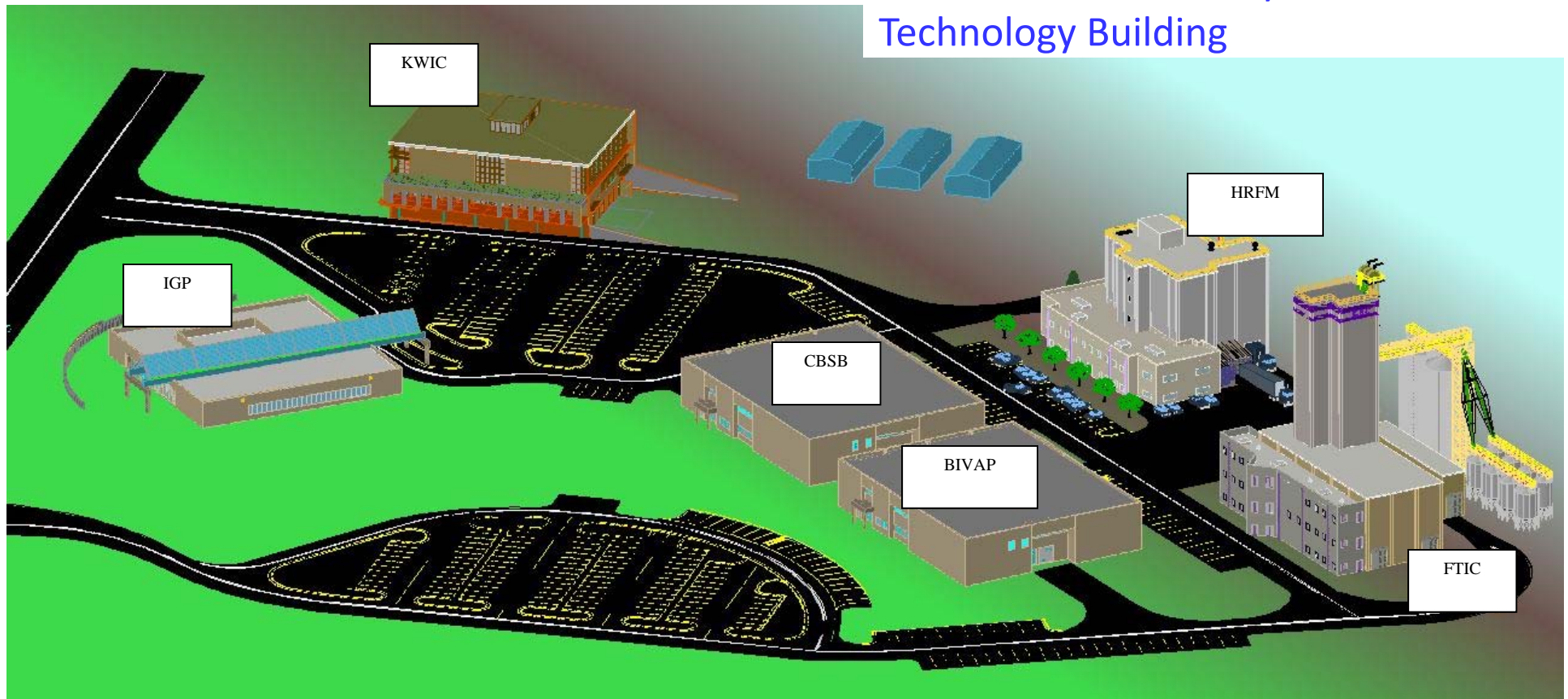
Spring 2012 – start construction

Summer 2013 – commission & dedicate



### Final Projects:

- Add Milling Science & Education Wing to Hal Ross Flour Mill
- Build Cereal & Bakery Sciences & Technology Building



**Envisioned completion of new Grain Science Innovation Campus**

# Strategic Plan Themes

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5. Develop, maintain and utilize state-of-the-art facilities and equipment.
6. **Broaden funding base and improve financial stewardship.**



## Financial Sustainability Metric 3 – Scholarship Support

Undergraduate scholarship support received by students in the Department of Grain Science and Industry (2007-2011).

<i><b>Year</b></i>	<i><b>BSM</b></i>	<i><b>MSM</b></i>	<i><b>FSM</b></i>	<i><b>Totals</b></i>
2007-08	\$71,771	\$41,099	\$25,000	\$137,870
2008-09	\$86,055	\$58,609	\$32,150	\$176,814
2009-10	\$87,825	\$57,500	\$30,525	\$175,850
2010-11	\$94,815	\$69,750	\$30,000	\$194,565
2011-12	\$113,307	\$88,780	\$27,040	\$229,127
<i><b>5-yr Totals</b></i>	<i><b>\$453,773</b></i>	<i><b>\$315,738</b></i>	<i><b>\$144,715</b></i>	<i><b>\$914,226</b></i>

➔ ***What are our targets?***

# Faculty Recognition & Sustainability



Dr. Jon Faubion  
Charles D. Singleton  
Endowed Chair in Grain  
Science & Industry



Dr. Subi Bhadriraju  
Donald A. Wilbur  
Endowed Professor of  
Stored Product  
Protection

Prof. Dave Krishock  
Bakers National  
Education Foundation  
Instructor of Bakery  
Science & Management



Prof. Fran Churchill  
NAMA Instructor of Milling  
Science & Management



# Faculty Recognition & Sustainability



Dr. xxx

G.M. Ross Endowed  
Professor of Milling  
Science & Industry



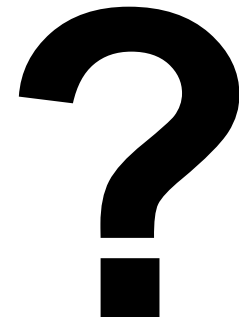
Dr. yyy

Gary & Betty Lortscher  
Professor of  
Renewable Energy



Prof. xxx  
Buhler Instructor of  
Milling Science &  
Management

Dr. yyy  
Jim & Carol Brown Endowed  
Professor in Feed Science &  
Management



# Current Grain Science Distance Ed Courses

## Available

- GRSC 101 Introduction to Grain Science (3 offerings, 75 students)
- GRSC 602 Cereal Science (5 offerings, 45 students)
- GRSC 745 Fundamentals of BioProcessing (Fall 2012)

## In Development

- GRSC 310 Materials Handling
- GRSC 510 Feed Technology I
- GRSC 625 Flour & Dough Testing
- GRSC 635 Baking Science I
- GRSC 636 Baking Science I Lab
- GRSC 655 Cereal Food Plant Design & Construction
- GRSC 661 Qualities of Feed Ingredients

## Proposed

- GRSC 637 Baking Science II
- GRSC 710 Fundamentals of Grain Storage

# Disciplined Action...

- The Flywheel

- No single defining action
- No one killer innovation
- No miracle moment
- No one single person



➔ Relentlessly pushing a giant, heavy flywheel in one direction, turn upon turn, building momentum until a point of breakthrough, and beyond





**“Greatness is largely a matter of conscious  
choice, and discipline!”**

**- Jim Collins**

# Our Iceberg is Melting

A line of penguins is walking along the edge of a melting iceberg. The iceberg is a large, white, triangular shape that is melting into the blue water. The penguins are walking in a single file line, moving away from the melting edge. A speech bubble from one of the penguins says, "So, enough with the talk. Let's do something." The background is a clear blue sky.

So, enough with the talk. Let's do something.

Do we have a clear **vision** of how our future will be different from our past?

Do we have an effective **strategy** to make that future a reality?

Do we have a real sense of **urgency** to grab our opportunities?

# My Key Priorities for 2012

- Fill vacant Feed Tech tenure track position, IGP Feed/Grain specialist position, Buhler Instructor position, recruiter position, and advertise 2 tenure track positions before end of Spring 2012 semester
  - Asst Professor in Feed Technology offer accepted in February 2012
  - IGP Feed/Grain specialist offer accepted in February 2012
  - Recruiter position to be filled in April 2012
  - Interviews for Buhler Instructor position in April or May 2012
  - Request to refill vice-Madl and vice-“Fairchild” positions to Dean in March 2012
    - Waiting on permission to advertise; need to develop position descriptions
- Get Feed Mill construction underway in Spring 2012 and explore funding opportunities for Phase II
  - Contract with GC to signed February 2012; construction to start May 2012
  - Pursue funding for Science & Education Wing via petfood industry
- Complete departmental 2025 Strategic Plan including SMART goals, KSU metrics and common elements before end of Summer 2012
  - Present DRAFT plan to dept advisory council in April 26, 2012
- Complete departmental space utilization plan including Shellenberger Hall consolidation before end of Fall 2012 semester
  - Present DRAFT plan to dept advisory council in October 2012

# Upcoming Events

- Accreditation Visit by the Higher Learning Commission – April 8-11, 2012
  - Review the quick guide and pocket guide
- Open House – April 21, 2012
  - Great team effort, lots of opportunities to volunteer
- Spring Awards Banquet – April 25, 2012
  - Recognize our awardees and scholarship recipients & donors
  - Recognize Outstanding Alumni & Supporters
- Dept Advisory Council meeting – April 26, 2012
  - Present Strategic Plan development DRAFT
- Stakeholder Group meetings – April 25-26, 2012
  - AFIA Executives meeting with feed science faculty
  - NAMA Milling Science Committee visiting MSM classes and meeting with milling science faculty
  - GEAPS Executive Officers meeting with KSU administrators and GSI faculty regarding distance education partnership
- COA Distinguished Alumnus [Dale Rodman](#), FSM'63 – May 5, 2012
- 5-year Department Head Administrative Review – Fall 2012

