

# At the Start of our Second Century... where are we headed?

GSI State of the Department Seminar  
Manhattan, Kansas  
April 12, 2011

Dr. Dirk E. Maier  
Professor and Head



# CONGRATULATIONS!!!


*100th Anniversary*



KANSAS STATE UNIVERSITY  
DEPARTMENT OF  
GRAIN SCIENCE AND INDUSTRY  
*1910~2010*

# THANK YOU!!!

# Our Iceberg is Melting



So, enough with  
the party. Let's  
look ahead!

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?

# K-State 2025 Initiative



K-State will  
be recognized  
nationally as a **Top  
50** public research  
university.

Where do we fit?

How do we position ourselves?

# 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."*



*"K-State Grain Science & Industry will be recognized internationally as the **global leader**."*

“\_\_\_\_\_ is the enemy of \_\_\_\_\_!”  
- Jim Collins





**“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*)





# New K-State Administration



Dr. Kirk Schulz  
President



Dr. April Mason  
Provost &  
Senior Vice President

Mr. Bruce Schubert  
Vice President  
for Administration  
and Finance



Dr. Gary Pierzynski  
Interim COA Dean &  
Interim KSRE Director



# 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





TEAMWORK

# Newest Team Members



Quenten Allen  
Milling Operations  
Manager



Michael Moore  
BSM Lab Instructor &  
Bakery Operations  
Manager



Royal Denning  
Adjunct Instructor of  
Milling Science &  
Management



Roberta Hodges  
Administrative Assistant  
to the Department Head  
& IGP Director



# Long-serving Team Members



Jan Taggart  
Accountant II  
Business Office



Suzan Adams  
IT Coordinator



Terri Mangiaracino  
Purchasing  
Administrator &  
Buildings Deputy

Anita McDiffet  
Senior Administrative  
Assistant - Extension



Susan Kelly  
Senior Administrative  
Specialist - BIVAP



Bev McGee  
Administrative Specialist  
& Graduate Student  
Services Coordinator



Cathy McGlothin  
IGP Coordinator &  
Office Manager

# *ONE Faculty Team!!!*



*KSU Grain Science & Industry Faculty  
August 2010*



# 2011 Students, Staff & Faculty Recognitions

- *Pls come and join us for the...*
- ➔ **Scholarship and Awards Banquet** April 20, 2011 at 6:30p  
at IGP Conference Center

## 2011 Alumni & Friends Recognitions

- *Pls come and join us for the...*
- ➔ **Outstanding Alumni & Service Awards Luncheon** April  
20, 2011 at 6:30p 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



# Budget Information



# 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?

# 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."*



# Strategic Plan Themes (DRAFT)

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.



<b><i>K-State 2025 Visionary Plan Themes</i></b>	<b><i>DRAFT GSI Strategic Plan Themes</i></b>
Scholarship, Research, Creative Activities	<ul style="list-style-type: none"> <li>- Conduct innovative basic and applied <u>research</u>, and <u>transfer</u> new technology and knowledge to end users.</li> <li>- Broaden <u>funding</u> base and improve financial stewardship.</li> </ul>
Undergraduate Educational Experience	<u>Educate undergraduate</u> and graduate <u>students</u> , and industry professionals.
Graduate Scholarly Experience	<u>Educate</u> undergraduate and <u>graduate students</u> , and industry professionals.
Faculty & Staff	Recruit, retain, reward and develop high quality <u>faculty</u> , and professional and classified <u>staff</u> .
Facilities & Infrastructure	Develop, maintain and utilize state-of-the-art <u>facilities</u> and equipment.
Engagement & Extension	<ul style="list-style-type: none"> <li>- <u>Educate</u> undergraduate and graduate students, and <u>industry professionals</u>.</li> <li>- Offer high-quality <u>outreach</u> programs and services to meet domestic and international customer needs and stakeholder expectations.</li> </ul>
Athletics	N/A

# Strategic Plan Themes (DRAFT)

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.







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



# Student Competitions: Next BIG Thing



2009 – 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> place in product category  
2010 – 2<sup>nd</sup> place in product category



# Second GSI Study Abroad Course – India 2010







ASB Chicago  
March 2011

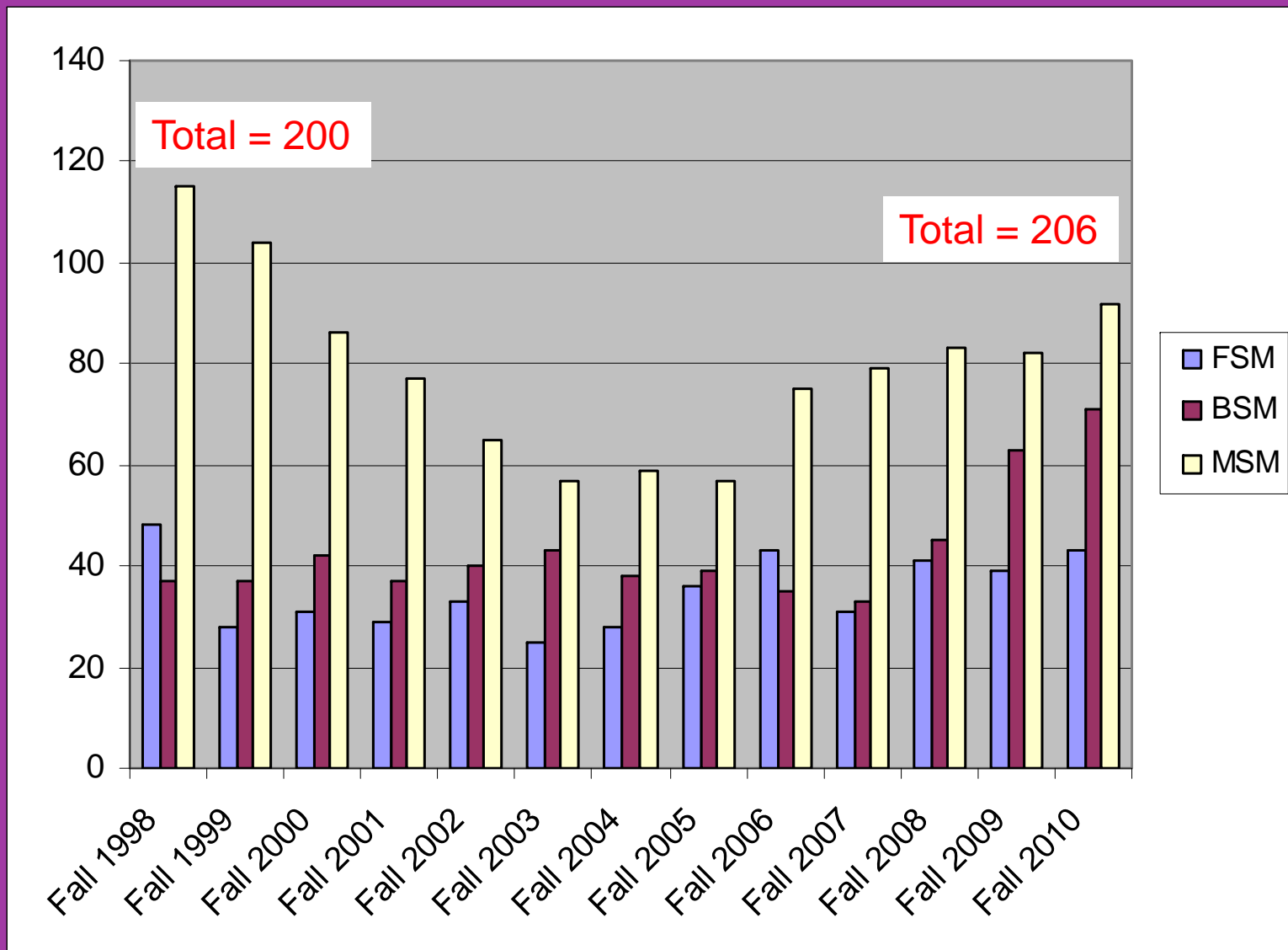


2011 Feed Industry Expo  
Atlanta

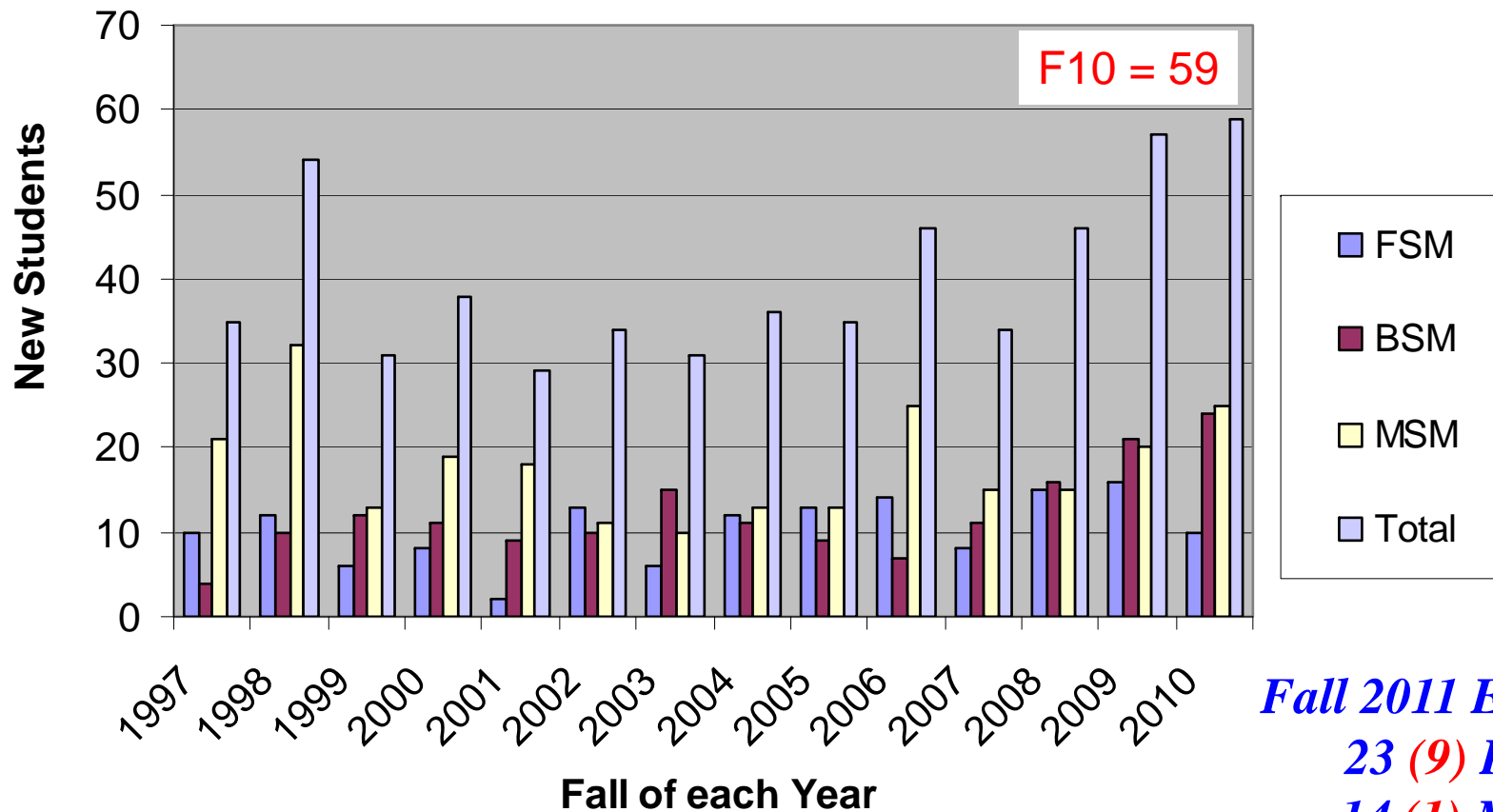
# Students becoming Professionals...



# Grain Science Undergraduate Student Enrollment Fall 1998-2010 (Fall'10: 43%F vs 57%M)



# New Student Enrollment - Fall 1997-2010



**Fall 2011 Estimate:**

**23 (9) BSM**

**14 (1) MSM**

**15 (3) FSM**

**52 (13) Total**





*Some of our Outstanding **49** Graduate Students*  
*MS 10d (2F, 8M, **2 URM**) 9i (6F, 3M)*  
*PhD 8d (3F, 5M, **1 URM**) 22i (13F, 9M)*



# Current Grain Science Distance Ed Courses

## Available

- GRSC 101
- GRSC 602

Introduction to Grain Science  
Cereal Science

## In Development

- GRSC 310
- GRSC 635
- GRSC 655
- GRSC 661
- GRSC 710
- GRSC 745

Materials Handling  
Baking Science I  
Cereal Food Plant Design & Construction  
Qualities of Feed & Food Ingredients  
Fundamentals of Grain Storage  
Fundamentals of BioProcessing

## Proposed

- GRSC 510
- GRSC 637
- GRSC ???

Feed Technology I  
Baking Science II  
Safety & Regulatory Issues



**42 students have taken GRSC dist  
ed classes for college credit this  
academic year!**

# Strategic Plan Themes (DRAFT)

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.



# Extramural Funding Support

	2003	2004	2005	2006	2007	2008	2009	2010	5-yr avg
HORT			\$325,671	\$387,539	\$633,383	\$1,046,426	\$1,082,763	\$514,216	\$732,865
AGEC	\$1,491,552	\$1,439,771	\$1,773,947	\$2,028,162	\$2,292,428	\$2,529,003	\$1,350,847	\$2,408,959	\$2,121,880
ASI	\$1,686,012	\$1,300,851	\$1,568,014	\$1,707,054	\$2,988,255	\$2,855,594	\$1,882,156	\$1,327,458	\$2,152,103
<b>GSI</b>	<b>\$2,883,078</b>	<b>\$2,476,275</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>\$2,164,292</b>
ENTM	\$1,295,809	\$1,670,454	\$1,507,496	\$2,784,940	\$2,848,309	\$2,075,416	\$1,560,774	\$1,898,520	\$2,233,592
AGRY	\$2,554,102	\$3,150,195	\$3,069,983	\$3,732,199	\$7,031,838	\$3,402,577	\$4,892,905	\$6,779,713	\$5,167,846
PP	\$3,363,112	\$5,322,627	\$4,105,332	\$4,214,156	\$5,343,061	\$3,714,770	\$7,607,972	\$6,754,886	\$5,526,969
COA totals	\$19,626,161	\$23,848,651	\$15,413,931	\$20,599,579	\$25,515,848	\$19,324,431	\$24,476,049	\$34,905,715	\$24,964,324



**GSI faculty & staff generated about \$11 million in extramural support during the past 5 years!**

Information from Pre-Awards Services

## Peer Journal Manuscripts by GSI Faculty

	2006	2007	2008	2009	2010	5-yr Avg
<b>Asst Profs</b>	2	8	12	6	9	7
<b>Assoc Profs</b>	1	0	2	9	8	4
<b>Full Profs</b>	10	20	24	21	26	20
<b>Total</b>	<b>14</b>	<b>28</b>	<b>38</b>	<b>36</b>	<b>43</b>	<b>32</b>



**GSI faculty published 159 peer manuscripts in the past 5 years!**

# GSI Patents Issued

- Since the KSU Research Foundation was started in 1942, the faculty in the GSI Department has accounted for about 24% of patents issued to KSURF
  - 51 out of 217 U.S. Patents
  - our faculty is ~1% of the KSU faculty
- 1<sup>st</sup> patent issued in 1954 to Miller & Johnson
- most patents issued to Dr. Paul Seib (20)
- IP licensing generates ~\$65,000/year for dept
  - most profitable patent generated \$400,000 to the dept



**GSI faculty submit ~4 IP disclosures per year to KSURF!**

# Strategic Plan Themes (DRAFT)

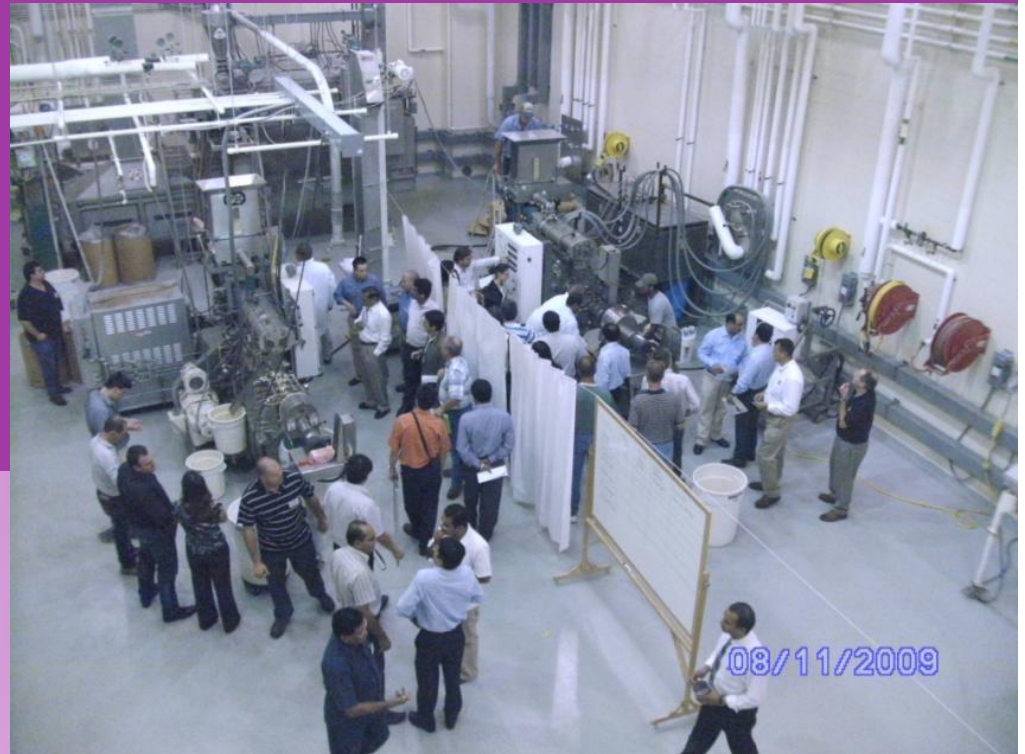
1. Educate undergraduate and graduate students, and industry professionals.
2. Conduct innovative basic and applied research, and transfer new technology and knowledge to end users.
3. Offer high-quality outreach programs and services to meet domestic and international customer needs and stakeholder 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.



# International Grains Program Accomplishments

- 25 courses in 2009
  - 478 course participants from 51 countries
- 27 courses in 2010
  - 477 course participants from 43 countries

**2009 Extrusion Short  
Course Participants in  
the KSU Extrusion  
Pilot Plant**





# Distance Education Partnerships

- **GEAPS-KSU** Grain & Biorefinery Operations
  - 32 offerings of 12 different courses
  - Over 1000 participants from 21 different countries
  - 86% completion rate
- **AFIA-KSU** Feed Technology
  - 2 offerings of 1 course
  - 82 participants from 9 different countries
  - 92% completion rate
  - New course in *Ingredient Quality and Food Safety*
- **IAOM-KSU** Flour Milling
  - Correspondence course exam management
    - Manage online exams for first three units
  - 37 participants from 7 different countries

# Strategic Plan Themes (DRAFT)

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.



# Faculty Positions Status

- 3 open faculty positions were cut to meet 10% FY10 budget cut
  - all three in Cereal & Bakery Sciences
- 3 eligible for retirement
  - 1 phased retirement through Dec'12 (Madl)
    - Potential to gain a tenure-track position back in Cereal/Bakery Sciences
- 2 new faculty positions for FY11
  - Milling/Grain Science (Haque) → Search Committee active (Round 2)
  - Feed Science (Behnke) → replaced by Dr. Leland McKinney
  - Grain/Feed Extension & Research (McKinney) → Search to start
- 1 Lab Instructor added to support BSM teaching (Michael Moore)
  - full-time person with extensive experience supporting BSM program growth incl teaching multiple lab sections and managing bakery facilities
- 1 Adjunct Instructor added to support MSM teaching (Royal Denning)
  - need full-time person with extensive industry experience to support MSM program growth incl teaching multiple lab sections (NAMA Instructor)

→ Strategic hiring of 5-7 new Faculty in next 1-5 yrs



# Strategic Plan Themes (DRAFT)

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.







# O.H. Kruse Feed Technology & Biorefinery Teaching and Research Center

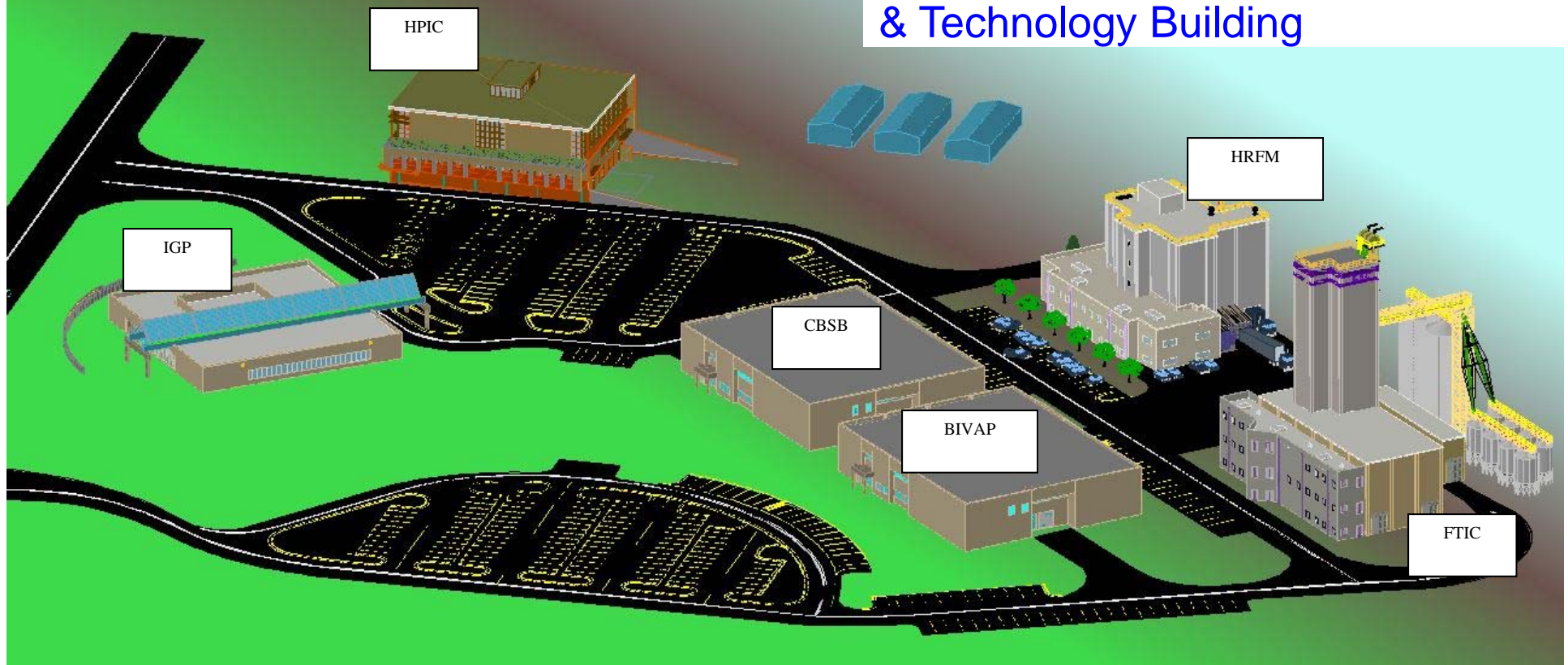
- estimated \$13.5 million project
  - \$2 million lead gift by Mr. Ron Kruse
  - \$1 million cash from grain, feed and biofuels industry so far
    - plus >\$2.5-3 million in equipment commitments
  - \$1.5 from KBA Matching Grant
  - \$5.2 million in NBAF relocation funds from Kansas State University
  - Seeking additional \$3-3.5 million cash and equipment from domestic and international grain, feed, biofuels and animal nutrition industry and allied trades



**Project Timeline:**  
**Summer 2011 – complete fund raising**  
**Fall 2011 – start construction**  
**Spring 2013 – commissioning and dedication**

### 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 (DRAFT)

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.**





# 2010 Giving Summary

- Comprehensive Giving = \$3,067,876
  - Outright gifts = \$309,281
    - \$60,905 Centennial celebration expenses, scholarships, classroom improvements
      - \$15,000 Sosland Publishing Company Centennial Publication scholarship
  - Pledges = \$1,358,595
    - Pledge payments = \$1,045,380
      - \$848,389 for feed mill project
      - \$165,077 in scholarship funds
      - \$100,000 Buhler Instructor
    - Outstanding pledges = \$313,215
  - Deferred gifts = \$1,400,000
    - \$1 million Jim & Carol Brown Endowed Professorship in FSM



**Centennial Celebration Initiative  
has so far generated over \$1,500,000!**

## Salina food additive company invests in future of K-State milling science students

Tuesday, May 11, 2010

Contact: Shanna Williams, [shannaw@found.ksu.edu](mailto:shannaw@found.ksu.edu)

Research Products Company, Salina, Kan., has made a commitment of \$12,500 to the Department of Grain Science and Industry in the College of Agriculture at Kansas State University to establish the Research Products Company Scholarship.

The fund will be established over a five-year period, and \$2,500 will be awarded annually in the form of scholarships for juniors or seniors enrolled in the Department of Grain Science and Industry, majoring in milling science and management.

## Milling scholarship makes education at K-State affordable for out-of-state students

Thursday, May 6, 2010

Contact: Shanna Williams, [shannaw@found.ksu.edu](mailto:shannaw@found.ksu.edu)

The Mennel Milling Company, Fostoria, Ohio, has made a commitment of \$55,000 to the Department of Grain Science and Industry in the College of Agriculture at Kansas State University to establish The Mennel Milling Scholarship.

The scholarship will benefit full-time undergraduate students majoring in milling science and management with a focus on operations, who live outside the state of Kansas. Eligible students must be from a county adjacent to one of Mennel's operating facilities in Illinois, Indiana, Michigan, Ohio or Virginia. The scholarship will pay the difference between out-of-state tuition and in-state tuition, and will also provide \$1,000 in travel expenses.

# 2010-2011 GSI Undergraduate Student Scholarships

<u>Program</u>	<u>#</u>	<u>Amount</u>	<u>Average</u>
BSM	46	\$94,815	\$2,061
MSM	49	\$69,750	\$1,423
FSM	39	\$30,000	\$ 769
<b>TOTAL</b>	<b>134</b>	<b>\$194,565</b>	<b>\$1,452</b>



→ 65% of students received scholarships

# Faculty Recognition & Sustainability



Dr. Jon Faubion  
Charles D. Singleton  
Professor of Grain  
Science & Industry



Dr. Jeff Gwartz  
G.M. Ross Associate  
Professor of Milling  
Science &  
Management



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

Prof. Chris Miller  
Bühler Instructor of Milling  
Science & Management



**Fall 2011: NAMA Instructor of  
Milling Science & Management**



# Best possible investment in industry's future



Morton Sosland is editor-in-chief of *Milling & Baking News* and *World Grain* magazines.

In marking as well as in joyfully celebrating this year the 100<sup>th</sup> anniversary of what is now the highly regarded Department of Grain Science and Industry at Kansas State University, it may be instructive to relate the department's history to the amazing transformation the milling industry itself has experienced in the past century. The same parallel path applies to the other grain-related industries — feed milling and baking — which are now important parts of the department's curriculum. It is not overreaching to declare that the department's path has been hugely affected by changes in the course of these industries, and that the startling changes that have occurred in these industries, in both the United States and around the world, are due in no small part to the influence of the department's faculty, its graduates and the outcome of research in which it has been involved. Understanding this inter-twining is not just essential to appreciating the past but to laying the foundation for future successful growth.

All too often in reviewing the history

of a university institution like the department, developments swirling outside of academia are omitted. In this case, though, that would not only neglect how the department's history relates to the industry's but would minimize one of the most astounding industrial revolutions in modern history.

At the time of the department's beginnings in the early years of the 20<sup>th</sup> century, flour milling was one of the largest, if not the largest, industry in America. Of course, that comparison comes at a time when industrial development itself was embryonic and the landscape had none of the industries that dominate currently. Thousands of flour mills, mostly family-owned enterprises, operated in nearly every city and even small towns, and the local mill owner was always one of the leading citizens. Employment totals were huge, even as the industry itself had just come off of embracing the new technology of roller milling, to replace stone grinding, that had been accomplished over a period of several decades in the last half of the 19<sup>th</sup> century.

**...the potential benefit for the industry and its member companies from what the department offers is so great that what might be regarded as philanthropy actually involves making one of the best investments possible in the future of the entire industry.”**

- Morton, L. Sosland, Editor-in-chief, *Milling & Baking News* and *World Grain* magazines

# 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 \_\_\_\_\_, and \_\_\_\_\_!”**


**- Jim Collins**



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



# Our Iceberg is Melting



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?

# Sense of Urgency

“A *real sense of urgency* is a distinctive attitude and gut-level feeling that lead people to grab opportunities and avoid hazards, to make something important happen *today*, and constantly shed low-priority activities to move faster and smarter, *now*.”

- John P. Kotter





# Upcoming Events

- Open House – April 16, 2011
  - Great team effort, lots of opportunities to volunteer
- Spring Awards Banquet – April 20, 2011
  - Recognize our awardees and scholarship recipients & donors
  - Recognize Outstanding Alumni & Supporters
- Kansas Secretary of Agriculture Dale Rodman Speech – April 20, 2011
  - we are hosting this college/campus-wide event
- Dept Advisory Board meeting – April 20-21, 2011
  - Focus on new faculty positions, stand-alone minors, budget situation, sustainability
- Initiate second Departmental Climate Survey
  - via K-State Office of Planning and Analysis in late Spring'11



**Questions? Comments?**