

Grain Science & Industry at KSU

Shawn Thiele
September 2018



New Faculty



Kaliramesh Siliveru



Rebecca Miller-Regan



Yi Zheng

- Kaliramesh Siliveru – Assistant professor specializing in grain processing and storage.
- Rebecca Miller-Regan – Assistant professor specializing in bakery science and management
- Yi Zheng – Assistant professor specializing in food fermentation.



Open Positions

Only 2 faculty positions left to be hired until full staff in GSI Department

- IGP Senior Agricultural Economist
 - <http://careers.k-state.edu>
- BNEF Baking Lab Manger
 - Not yet posted

Undergraduate Enrollment

Year	BSM	FSM	MSM	GSI Total	GSI 5 yr average
Fall 2014	92	52	74	218	207
Fall 2015	70	54	68	192	204
Fall 2016	70	46	73	189	201
Fall 2017	62	47	88	197	201
Fall 2018	56	43	79	178	195



Recruiting Efforts

- Increased awareness through events like "Feed the Future"
- Consolidated "Promotional Materials" that can be shared directly or through industry partners, online web-based, and social media
- More "on-campus" and "trade show" recruiting activities
- Working through the how and who to create class room "teaching materials" and "lab kits" for high school teachers that promote grains, education, and build-brand awareness

bheptig@ksu.edu

Department News

- Job placement for our students continues at **>100%**
- Internships are numerous, occurring as early as summer after freshman year
- Gordon Smith spent 6 weeks with Ardent Mills over the summer
- Curriculum revisions addressing the 120 credit hour target for all three majors are complete
- Scholarship giving to the department remains strong
- Support for the department from the College of Agriculture remains strong
 - Ernie Minton assumed the role of Interim Dean for the College of Ag
- Jon Faubion will retire Spring 19
- Major targeted facility improvement on-going (classrooms, library, labs)



Milling Asset Improvements

Industry partners have committed in principle to substantial improvement of milling assets

- 10 new table top milling units in Shellenberger 101 (Alapala)
- New small bag packer in HRFM (FAWEMA)
- Construction of a research specialty mill in HRFM (Buhler)
- Programming update in HRFM (Buhler)
- Other HRFM Upgrades
 - Wheat heater
 - Wheat cooler
 - Vibronet conditioning system
 - Tempering aid addition system



GSI Milling Assets

Teaching

Research

Testing

Hal Ross Flour Mill
Buhler Laboratory Mills
Shellenberger Milling Labs
Miag Multomat Mill

O.H. Kruse Feed Technology Innovation Center
Extrusion Innovation Center
FGIS Approved Grain Grading Room and Equipment
IGP Institute Conference Center



IGP Institute

- Provides educational and technical programs in support of consumption, promotion and export of US cereal grain and oilseeds
- Education and training developed and delivered by university professors and industry experts

Core curricula areas

- Flour milling and grain processing
- Feed manufacturing and grain storage
- Grain marketing and risk management

IGP Institute

Flour Milling and Grain Processing

- [IAOM-KSU Milling Program](#)
 - Introduction to Flour Milling
 - Basic Milling Principles
 - Advanced Milling
 - Flour and Dough Analysis
- [Buhler-KSU Milling](#)
 - Executive Milling (English and Spanish)
 - Expert Milling (English and Spanish)
 - Flowsheet Technology (English)

Feed Manufacturing and Grain Quality Management

- [IGP-KSU Programs](#)
 - Feed Manufacturing
 - Extrusion Processing: Technology and Commercialization
 - Pet Food Workshop
 - Grain Elevator Managers
 - NGFA-KSU FSMA for the Feed Industry
 - Pet Food Formulation For Commercial Production

Grain Marketing and Risk Management

- [IGP-KSU Grain Purchasing](#)
- [IGP-KSU Risk Management](#)



2017
88 Courses
1,898 Participants
67 Countries

- | | | |
|--------------------|-------------|--------------------------------|
| Argentina | India | Saudi Arabia |
| Australia | Indonesia | Singapore |
| Barbados | Italy | South Africa |
| Brazil | Jamaica | Spain |
| Bulgaria | Japan | St. Vincent and the Grenadines |
| Burundi | Kenya | Swaziland |
| Canada | Lesotho | Switzerland |
| Chile | Madagascar | Tanzania |
| China | Malawi | Thailand |
| Colombia | Malaysia | Trinidad and Tobago |
| Congo | Mexico | Tunisia |
| Costa Rica | Morocco | Turkey |
| Cyprus | Mozambique | U.A.E. |
| Dominican Republic | Namibia | U.K. |
| Ecuador | New Zealand | U.S. |
| Egypt | Nicaragua | Uganda |
| El Salvador | Nigeria | Venezuela |
| Ethiopia | Norway | Vietnam |
| Ghana | Panama | Zambia |
| Grenada | Peru | Zimbabwe |
| Guatemala | Philippines | |
| Haiti | Puerto Rico | |
| Honduras | Russia | |
| | Rwanda | |



THE IGP INSTITUTE HAD **1,898 PARTICIPANTS** THROUGH ON-SITE AND DISTANCE COURSES IN 2017



Opportunities

- Drive program awareness to increase enrollment
- Update facilities
- Ensure the curriculum/course content is appropriate
- Leverage industry connections to drive program progress
- Identify and conduct industry meaningful research
 - Especially related to milling, baking and feed science

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IGP Institute, Kansas State University
Department of Grain Science and Industry



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Questions? Go Cats!



Megan Holton



Ryle Anderson



Myra Perez-Fajardo



Gordon Butler-Smith

It's a Grain-Based WORLD

Department trains leaders to meet future challenges

"We are the only program in the U.S. that trains its students to understand where grain comes from, who raises it, how it is stored, how it is further processed, and how that processing affects what people or animals ultimately ingest as part of the food supply."

—Gordon Smith

Training Global Leaders

With the world population expected to rise to more than 9.7 billion people by 2050, the pressure on the earth's resources has never been greater. To help meet that challenge, faculty in the Department of Grain Science and Industry are training future researchers and industry professionals in the areas of bakery science, milling science and feed science.

Through their research efforts and humanitarian work, the team helps solve global malnutrition through novel food processing and enhance means of grain storage to maximize the world's resources among other things. This is accomplished through funding support via national grants as well as with industry partnerships. According to Department Head Gordon Smith, the department finds unique ways to address difficult challenges.

Undergraduate Education

Smith credits the faculty's industry experience for providing students with real-world learning opportunities. "All of the faculty are highly integrated with the industry and more than 80 percent

have industry experience, so they can train students to meet current and future demands."

The department averages 200 undergraduates and 50 graduate students annually. "About half of our graduate students are international, so we're training people who are going to work all over the globe," Smith added.

Undergraduate students participate in clubs related to their majors and an undergraduate honorary society. A graduate student organization offers hands-on activities and trips to national meetings. (Clarify)

Gideon Butler-Smith, Overland Park, said he appreciates all the experience he gains as a bakery science and management student.

"The Bakery Science Club focuses on running a small business and producing baked goods for the Manhattan community. I am the production manager this year facilitating the scaling, mixing, and baking of our cherished products," explained Butler-Smith. "This club allows students from all majors and backgrounds to experience the joy of baking and learn a little bit of science



Grain Science Friends and Alumni Golf Tournament

Friday, September 28th • 1:00 p.m. Shotgun Start • Stagg Hill Golf Club

To register for the tournament or request more information contact Jason Watt jwatt1@ksu.edu or Shelby VenJohn venjohn52@ksu.edu



The tournament is hosted by the Bakery Science Club.

Proceeds will be used for equipment updates in the baking labs.

\$100 per person

Fee includes cart, greens fees and dinner catered by Blue Hills Catering.

There will be golf games on the course and an auction with dinner.