

# Northern Crops Institute Annual Update

2014

Northern Crops Institute supports regional agriculture and value-added processing by conducting educational and technical programs that expand and maintain domestic and international markets for northern-grown crops.



Feed Center Photo by Elise Schafer, see page 6

*Connecting in the Global Marketplace*



## A Note from the NCC Chair

Karolyn Zurn, Callaway, Minn.  
Minnesota Soybean Growers Association

Greetings and Happy New Year:

I would like to reflect back over this past year with hopes that NCI is growing and progressing.

We took on a large commitment with the feedmill renovation. This renovation was a complete success. A feedmill that is state of the art is ours to showcase to the many groups of people that come for course work. The NCI needed to be in the same class as other educational institutions to gain more interest from key players. The grand opening of the feedmill was also a success, drawing public eye and publicity.



Zurn

We have a new website and also a new film introducing the appeal to NCI.

The lab underwent an overhaul and now we are in the process of a remodel for the lobby.

The staff has been really busy working on the additional courses held at NCI. We had more courses than ever before in 2014.

The amount of visitors passing through NCI also visited several area farms conversing with the owners and their families. They also visited grain elevators and our North Dakota Mill. What better way than to introduce people to our agriculture of the North.

Several commodity groups have engaged with NCI giving more support for future courses. Having said that, I believe that the NCI's future will be, among other things, with new uses in area crops.

The growers of diverse crops raised in the North will rely on NCI more and more to tell their story and promote new products.

Some of this promotion will be in foreign places. So be it. Sometimes practices have to change to meet the challenges of competition. The NCI will stay a strong contender in the world by drawing more interest through mini courses off campus.

## Director's Corner

Mark Weber  
Director, Northern Crops Institute

NCI had a very successful 2014, and I would like to highlight some of our recent success stories.

This past summer, we completed a major equipment upgrade to the NCI Feed Production Center. The upgrade included the installation of a new mixer, new computer automation system, and the facilities first micro-ingredient system. The \$833,000 project was funded from several sources, including an initial \$100,000 one-time appropriation from the 2013 N.D. Legislature. The feed industry and N.D. soybean and corn commodity groups donated the remainder of the project.



Weber

Twenty participants from China were the first group to use the new equipment while attending our Feed Technology Course.

In 2014, we held the largest number of educational short courses since our inception, and we broadened the array of courses offered for other crops. We also significantly increased technical service support to processors and users of regional commodities. Cooperation is the key to our success.

We are partnering with the International Grains Program (IGP) at Kansas State University to deliver educational programming in food safety, risk management, milling, and extrusion processing. IGP's flour milling director assists with our pilot-scale flour mill to help increase mill efficiency, train our staff in its operation and increase business opportunities within the milling industry.

During the last few years, NCI staff has given seminars at the Culinary Institute of America. They educated chefs on how to incorporate peas, lentils and garbanzo beans into their food menu items. According to the Northern Pulse Growers Association, these efforts helped generate additional interest leading to several pulse processing plant expansions in North Dakota employing 75 additional people.

A wheat buyer recently hired to manage a new flour mill built in Indonesia attended his first "Wheat Contracting for Value" workshop at the NCI in 2013, where he learned how to better manage his supply chain and write contracts that accurately specify the type of wheat he needs to purchase. According to U.S. Wheat Associates, he returned home and made a first-time purchase of \$9 million of U.S. Hard Red Spring Wheat.

These success stories are just examples of what NCI has accomplished working together with the North Dakota, South Dakota, and Minnesota Legislatures, the four-state commodity groups, agriculture and trade offices, industry leaders and the excellent scientific community at North Dakota State University and other regional land-grant universities.

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## 2014-2015 Northern Crops Council (NCC)

**Karolyn Zurn, Chair**  
Callaway, MN  
MN Soybean Growers

**James Aarsvold**  
Blanchard, ND  
ND Corn Growers

**Beau Anderson**  
Williston, ND  
Northern Pulse Growers  
Association

**John Bartsch**  
Maple Grove, MN  
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Minneapolis, MN  
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**Greg Kessel**  
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ND Barley Council

**Milo "Buzz" Mattelin**  
Culbertson, MT  
MT Wheat & Barley  
Committee

**Dwight Mork**  
Bellingham, MN  
MN Corn Research and  
Promotion Council

**Keith Peltier, Vice Chair**  
West Fargo, ND  
Proseed

**Perry Ostmo**  
Sharon, ND  
ND Soybean Council

**Greg Svenningsen**  
Valley City, ND  
ND Wheat Commission

**Arnold Woodbury**  
Wyndmere, ND  
ND Oilseed Council

## Thank You to the Outgoing Northern Crops Council Members for Their Service to NCI



NCC Chair Karolyn Zurn (middle) and NCI Director Mark Weber (far right) thanked the outgoing NCC board members for their service on the Northern Crops Council (NCC) by presenting each with an engraved clock at the June 2014 meeting. Kevin Skunes (far left), Arthur, N.D., represented the North Dakota Corn Utilization Council for two terms. Bob Majkrzak (second from left), Fargo, N.D., finished two terms on the NCC and also served two years as NCC Chair, representing Red River Commodities. He will continue to serve on the NCI Industry Advisory Board. Mark Jossund (second from right), Moorhead, Minn., represented the Minnesota Wheat Research and Promotion Council during his two NCC terms. Thank you all!

## 2014-2015 Industry Advisory Board

- Jennifer Tesch, Chair  
SK Food International
- Brice Anderson  
Cargill
- Mark Askegaard  
Askegaard Organic Farm
- Eric Bartsch  
AGT Foods USA
- David Berg  
American Crystal Sugar
- Darwin Britzman  
International Nutrition  
Consulting Inc.
- Anthony Chavez  
Buhler Inc.

- Ron DeJongh  
Columbia Grain
- Carrol Duerr  
Colfax Elevator
- Mike Gray  
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- Brad Hennrich  
Hesco, Inc.
- Roger Hipwell  
MGI Grain Processing LLC
- Mike Keller  
ADM Company
- Thomas Kersting  
SD Soybean Processors, Inc.
- Brad Kjar  
Tharaldson Ethanol

- Gerald Leukam  
The Weitz Co.
- Jon Long  
BNSF Railway Inc.
- Robert Majkrzak  
Red River Commodities
- Paul Sadosky  
Summit Brewing Company
- Terry Selleck  
Bay State Milling
- Robert Sinner  
SB&B Foods Inc.

- Travis Sitter  
Silveus Insurance Group
- Alan Slater  
Busch Agricultural Resources
- Brian Sorenson  
Dakota Specialty Milling
- Scott Stofferahn  
Golden Growers Cooperative
- Tom Streifel  
Highwater Ethanol
- Vance Taylor  
North Dakota Mill

*We are sorry to note the passing of **David Polries** in October. Dave served on NCI's Industry Advisory Board for several years, representing Dakota Dry Bean in Grand Forks, N.D.*

## NCI Welcomes Brooks as Account Technician



Brooks

**Janel Brooks** joined the NCI staff in October as the new Account Technician. Janel has over 20 years in the accounting field, with the last five in agriculture.

Her duties include maintaining NCI's budget records, financial statements, and projections. She is also responsible for tracking special funds, accounts payable and accounts receivables, invoicing, purchasing, and general office activities. Janel attended NDSU and the University of Mary with a concentration in business management/accounting.

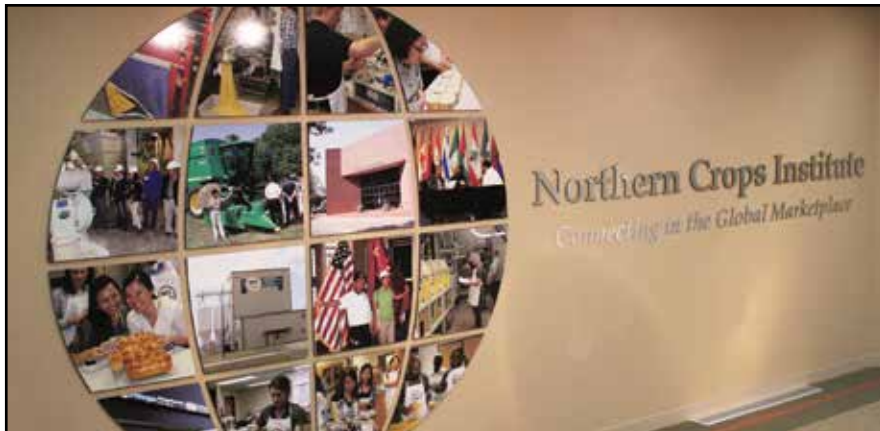
## Thank You to our 2015 Agribusiness Sponsors:

- AGT Foods USA
- Ameriflax
- Askegaard Organic Farm
- Bay State Milling Company
- Buhler Inc.
- Columbia Grain
- Dakota Growers Pasta Co., Inc.
- Dakota Specialty Milling
- Sue and Dave Katzke
- Becky and Kim Koch
- North Dakota Farmers Union
- North Dakota Grain Dealers Association
- North Dakota Grain Growers Association
- Northern Canola Growers Association
- Northern Plains Potato Growers Association
- Northern Pulse Growers Association
- Proseed
- Red River Commodities
- Red River Valley Sugarbeet Growers Association
- Richland IFC, Inc.
- SB&B Foods Inc.
- SK Food International
- Summit Brewing Company
- Weber Farms

Check out our NEW website! Same address...NEW look!  
Visit us at: [www.northern-crops.com](http://www.northern-crops.com)



## Lobby Renovation In Progress



Since the furnishings and lights in the NCI Lobby have not replaced since the facility opened in 1983, a renovation effort is underway. After much planning, the work started with the installation of a global graphic on the south wall. An improved lighting system, new seating areas, digital signage, updated main office, and two new staff offices will also be added. The Northern Crops Learning Center, a new feature in the Lobby, will highlight the crops grown in the region through real crop displays and two electronic systems that will provide visitors with information about our northern-grown crops and the four-state region.

## A Special Thank You to Our 2013-2014 Funding Partners

- Minnesota Dept. of Agriculture
- Minnesota Soybean Research and Promotion Council
- Minnesota Wheat Research and Promotion Council
- Montana Wheat and Barley Committee
- State of North Dakota
- North Dakota Barley Council
- North Dakota Soybean Council
- North Dakota Wheat Commission
- Northharvest Bean Growers
- State of South Dakota
- South Dakota Soybean Research and Promotion Council
- South Dakota Wheat Commission

## Thank You to All Who Supported NCI Programs and Activities in 2014

North Dakota State University	New Hope, Minn.	Northern Food Grade Soybean Assn.
Agribusiness and Applied Economics	Alexis Freier-Johnson	Northern Pulse Growers Association
Dwight Aakre, M.S.	Dakota Specialty Milling	Philadelphia Macaroni Company
Frayne Olson, Ph.D.	Fargo, N.D.	Bill Stabert
Andrew Swenson, M.S.	Robert Meyer	PolyCell Technologies
William Wilson, Ph.D.	De Mari Pasta Dies	Tom Jorgens
Cereal and Food Sciences	Dracut, Mass.	Richland Organics Inc.
Clifford Hall, Ph.D.	Gabriele Cannata	Matt Bohn
Plant Sciences	Duluth (Minn.) Seaway	Rick Brandenburger
Elias Elias, Ph.D.	Port Authority	SB&B Foods Inc.
Rich Horsley, Ph.D.	Ron Johnson	Robert Sinner
Frank Manthey, Ph.D.	Adele Yorde	Scott Sinner
Kevin McPhee, Ph.D.	EGT, LLC	Todd Sinner
Mohamed Mergoum, Ph.D.	David Jenkins	SK Food International
Juan Osorno, Ph.D.	Frontier Futures, Minneapolis, Minn.	Aaron Skyberg
Senay Simsek, Ph.D.	Austin Damiani	Jennifer Tesch
Agassiz Valley Grain	Scott Gauslow Farm, Colfax, N.D.	Joshua Thorsvig
Dan Noreen	Global Innovative Solutions	South Dakota State University
AgriBank, FCB, St. Paul, Minn.	Gene Griffin	Animal Science Dept.
David Bullock, Ph.D.	Bill Hejl Farm, Amenia, N.D.	Robert Thaler, Ph.D.
Alton Grain Terminal	Hunter (N.D.) Grain Company	SunOpta, Inc., Moorhead, Minn.
Cory Tryan	Paul Skarnagel	Mark Halvorson
Axor America, Inc., Plymouth, Minn.	Kansas State University	Greg Svenningsen Farm, Valley City, N.D.
Al Lucia	International Grains Program	Technical Foods Consultants
Benson-Quinn Co., Minneapolis, Minn.	Mark Fowler	Cincinnati, Ohio
Randy Narloch	Mark Levos Farm, Embden, N.D.	Clyde Stauffer
Brushvale Seed Inc.	Peter Lovas Farm, Hillsboro, N.D.	The Money Farm, Fargo, N.D.
Breckenridge, Minn.	Ron Mattson Farm, Lake Park, Minn.	Mike Krueger
Paul Holmen	MGI Grain Processing LLC	USA Dry Pea and Lentil Council
BNSF Railway Inc.	Roger Hipwell	Mackenzie Femreite
Jon Harman	Minneapolis Grain Exchange	USD FAS Cochran Fellowship Program
Buhler, Minneapolis, Minn.	Joe Albrecht	USDA/GIPSA/ FGIS
Michael Ehr	Mishek Inc. and Associates	Lynn Thomas
Franz Signer	Peter Mishek	U.S. Dry Bean Council
Simon Tiedge	Montana State University	U.S. Grains Council
Cargill, Inc., Minneapolis, Minn.	Jay Myers Farm, Colfax, N.D.	U.S. Soybean Export Council
Maurice Hurst	Jay Nord Farm, Wolverton, Minn.	U.S. Wheat Associates
Wayne Koester	North Dakota Barley Council	Roy Chung
CHS, Inc.	Steve Edwardson	Ian Flagg
Inver Grove Heights, Minn.	Greg Kessel	Joe Sowers
Ryan Caffrey	North Dakota Grain Inspection Service	Mike Spier
Mike Klein	Pat Kehoe	Steve Wirsching
Savage, Minn.	North Dakota Mill, Grand Forks, N.D.	University of Minnesota
Greg Oberle	Travis Devlin	Dept. of Food Science and Nutrition
Superior, Wisc.	Vance Taylor	Joanne Slavin, Ph.D.
Dick Carlson	North Dakota Soybean Council	Wenger Manufacturing, Inc.
Colfax Elevator	Diana Beitelspacher	Sabetha, Kan.
Carrol Duerr	Stephanie Sinner	Gerry Hertzal
Columbia Grain	North Dakota Wheat Commission	Brian Plattner
Minneapolis, Minn.	Neal Fisher	Wheat Value Consulting
Darren Bjornson	Erica Olson	John Oades, Ph.D.
Ron DeJongh	Jim Peterson	Wilbur-Ellis
Dakota Growers Pasta	Northarvest Bean Growers	Tomas Belloso

## Northern Crops Institute Celebrates Feed Center Upgrade

### Much of the \$800,000 Project Costs Came from Donations

Northern Crops Institute hosted an Open House on Wednesday, August 20, to celebrate the completion of a major equipment upgrade at the NCI Feed Production Center. The upgrade included the installation of a new mixer, a new automation system, and the facility's first micro-ingredient system. About 80% of the over \$800,000 project costs came from commodity groups and private industry donations, according to NCI Director Mark Weber.

Funding for the upgrade was a collaborative effort between the North Dakota Legislature, the feed equipment industry, and regional commodity groups. It began with seed money from North Dakota's 63rd Legislative Session in 2013, and grew with monetary donations from the North Dakota corn and soybean commodity groups, and generous equipment donations from the feed industry's equipment manufacturers. North Dakota State University also provided valuable facility management services.

NCI Director Mark Weber says, "We were very excited for the public to come and see the new Feed Center equipment and learn about our new and expanded technical capabilities. At the Open House, we recognized and thanked our industry donors and commodity partners for their significant support in this major equipment renovation."

The Feed Center hosts feed training courses for participants from around the world and serves as a training facility for regional undergraduate and graduate students. In addition, the center is a working feedmill, producing livestock feed for the university's animal units as well as research projects.

"This renovation was necessary to aid the education capabilities of NCI. The two primary goals of the Feed Center are to teach feed manufacturers and to make feed for the NDSU animals," says Kim Koch, Ph.D., NCI Feed Center manager. "Our previous system made good feed, but it was not the kind of system on which you want to train

(continued on page 7)



Kim Koch, Ph.D., NCI Feed Center Manager, thanks the Feed Center donors for their support.



2014 Feed Manufacturing Technology course participants

### Chinese Feed Manufacturers First to Use New NCI Feed Equipment

Eighteen leading Chinese feed manufacturers were at the NCI Feed Center to attend the Feed Manufacturing Technology course the week of August 18-22. They were the first group to do hands-on training with the new equipment.

The team was sponsored by the Minnesota Soybean Research and Promotion Council, North Dakota Soybean Council, and the South Dakota Soybean Council, in conjunction with the U.S. Soybean Export Council (USSEC).

"China is the largest user of soybeans and the largest manufacturer of animal feed in the world," says Kim Koch, NCI Feed Center Manager and lead instructor for the course. "Their demand for feed is increasing annually by 10-12%. China raises 50% of all the pigs in the world, but their poultry production is gaining ground on swine, and aquaculture is becoming more important. Chinese domestic production of soybeans and corn has probably peaked, and therefore, they are becoming major importers of soybeans and corn."

"We strongly believe that the high quality soybeans produced in Minnesota, North Dakota and South Dakota result in better animal performance. Regional soybean production will continue to increase in the next five to ten years. NCI is very grateful to the regional soybean commodity groups who conceived and sponsored this course," he concludes.



The NCI Feed Center was featured in the Oct/Nov 2014 Feed & Grain Magazine. This photo by Editor Elise Schafer was the cover photo.

people for the modern feed industry. Because NCI is a globally-recognized leader in training and education, our visitors expect to see the most modern equipment. It's a competitive world and we need to be at the highest level of technology."

"Gerald Leukam, who was employed by T.E. Ibberson when this project began, provided invaluable assistance with securing equipment donations," according to Koch.

Leukam is currently Director of Business Development with The Weitz Company, Minneapolis.

"Equipment vendors that participated in this modernization project saw the value of students and short course participants having hands-on experience with feed manufacturing equipment," says Leukam.



Leukam

"The equipment manufacturers who were invited to participate in this project are leaders in the industry. They realized that NCI has to stay current with state-of-the-art equipment and processes in order to keep the interest of students and keep the industry respect that NCI has earned. The equipment manufacturers understand that the

primary purpose of NCI is to provide more opportunities for the growers of northern-grown crops. Modern equipment and first class controls in the Feed Production Center will allow NCI to stay in front of an ever-changing world marketplace, and demonstrate it is in the forefront of feeding the world's growing population," Leukam concludes.

"With the region's huge increase in soybean and corn production, Minnesota, North Dakota, and South Dakota have become a significant soybean and corn production region of the U.S.," says Weber.

"The NCI Feed Center will become an even more important part of NCI's overall programming. The upgrade enhances NCI's worldwide reputation as a



The feed course participants enjoyed a visit to the Scott Gauslow farm near Colfax, N.D. Later in the week, they toured the EGT Export Terminal in Longview, Wash., and the Wilbur-Ellis Company, a feed ingredient company in Clackamas, Ore.

provider of high quality feed technology programming using soybeans, corn, dried distillers grains, barley, and other crops grown in this region," he concludes.

### **NCI Feed Center Upgrade Donors included:**

APEC-Automated Process Equipment Corp.  
Bliss Industries, Inc.  
Border States Electric  
Endress+Hauser  
Industrial Fabrication Services, Inc.  
Interstates Control Systems, Inc.  
Intersystems, Inc.  
Seedburo Equipment Company  
Scott Equipment Company  
The Essmueller Company  
Viking Pump, Inc.  
North Dakota Corn Council  
North Dakota Soybean Council  
North Dakota 63rd Legislative Assembly 2013

## NCI Partners with IGP/KSU for Durum Wheat Milling Course

Guatemala, Mexico, USA • April 7-9, 2014

The first joint NCI/IGP Durum Wheat Milling Short Course was offered at NCI April 7-9.

The course was co-sponsored with the International Grains Program (IGP) at Kansas State University. Lead instructor was Mark Fowler, IGP Associate Director and Milling Specialist.



Fowler

The course was coordinated by John Crabtree, NCI Assistant Director.

Eleven participants from Guatemala, Mexico and U.S. attended. Many participants were

sponsored by U.S. Wheat Associates.

This course was designed to give participants a better understanding of the durum milling process and to add insight into milling performance and semolina quality.

“Combining the milling expertise of IGP’s Mark Fowler and NCI’s flour mill that can process both durum wheat and hard red spring wheat provided a very strong milling program for our course attendees. This partnership makes for a unique educational course,” says NCI Director Mark Weber.

“This course focuses on the advanced principles of durum milling, covering the specifics of durum milling and how durum milling may be differ-



ent than the milling of other classes of wheat,” says Mark Fowler. “Through lectures and demonstrations, we covered the principles of durum milling, the impact of durum quality of semolina extractions, and how semolina quality can impact pasta manufacturing. The durum course was an excellent opportunity to collaborate with NCI and share my expertise as a technical miller,” he concludes.

Additional course speakers were: Elias Elias, Ph.D., NDSU Department of Plant Sciences; David Hahn, Ph.D., NCI Director of Technical Services and Business Development; Frank Manthey,

Ph.D., NDSU Department of Plant Sciences; Franz Signer, Buhler; Andrew Swenson, NDSU Extension Service; and Simon Tiedge, Buhler, Inc.

Highlights during the course included handling and blending, plant maintenance, and hands-on experience in the NCI pilot-scale Durum Mill and the NCI Pasta Extrusion Laboratory.

**Mark Fowler** has joined the NCI team as the Milling Consultant. Fowler will direct efforts to improve operating performance and efficiencies in NCI’s Flour Mill, train NCI staff in the mill’s basic operations, teach educational programs related to flour milling, and build partnerships with private industry who want to utilize NCI’s facilities.

Mark will continue his duties as Associate Director of the International Grains Program (IGP) Institute at Kansas State University. He received his bachelor and master’s degree from Kansas State University.



2014 Durum Wheat Milling and Pasta Production and Technology course participants



A participant examines the different samples of milled wheat.



## Two 2014 Pasta Courses Focused on Varied Needs of Processors

**Traditional Pasta: Canada, Guatemala, Mexico, Nigeria, USA • April 9-11, 2014**

**Blended Wheat Pasta: Ecuador, Colombia, and Haiti • May 13-15, 2014**

Two pasta courses were offered at NCI in 2014.

Twenty-four pasta manufacturers from Canada, Guatemala, Mexico, Nigeria and USA attended the Pasta Production and Technology Course that was held April 9-11 at NCI. U.S. Wheat Associates sponsored some of the course participants. Most of the durum milling course participants stayed to attend the Pasta Production and Technology course.

This course is designed to showcase the high quality durum wheat that is produced in the four-state region of North Dakota, Minnesota, Montana, and South Dakota. NCI has offered this course annually since 1984. North Dakota is the #1 producer of durum wheat. North Dakota State University has the only durum breeding program in the nation.

Five Latin American pasta manufacturers and millers attended NCI's Utilization of U.S. Wheat Classes in Pasta Production and Technology course May 13-15. They were from Ecuador, Colombia, and Haiti. Most of the participants were sponsored by U.S. Wheat Associates.

This customized course was designed to assist pasta processors who for economic reasons need to use cheaper wheats and blend them to meet their pasta specifications.

Course topics included an overview of U.S. wheat classes, 2014 U.S. wheat supply, wheat quality evaluation, physical and rheological quality tests for flour and semolina, impact of protein and starch on pasta quality, commercial pasta production, quality assurance, functional and alternative pasta ingredients, food safety, and possible causes and solutions of pasta defects. Hands-on pasta processing and cooking quality evaluations supplemented course lectures.



Rilie Morgan, NCI Processing Specialist, explains the pasta press operation.



Pasta course participants prepare fresh pasta for the drying process.



2014 Utilization of U.S. Wheat Classes in Pasta Production and Technology course participants



Rachel Carlson, NCI Food Technologist, demonstrates the Pekar Slick Test that compares a flour sample's color against a standard sample.



A pasta course participant catches a batch of pasta as it comes out of the pasta extruder.

# Interest in Pulse Food Applications GROWS...

## Extruded Snacks with Pulse Ingredients Course

Germany, Indonesia, Mexico, Spain, USA • June 2-5, 2014

NCI hosted 16 participants at the Extruded Snacks with Pulse Ingredients Course in June. Participants are from Germany, Indonesia, Mexico, Spain, and the U.S.

The course was offered in collaboration with Northern Pulse Growers Association, Northarvest Bean Growers Association, U.S. Dry Bean Council, and the USA Dry Pea & Lentil Council.

This course featured the utilization of pulse crops, specifically dry edible beans, peas, and lentils, in extruded snack foods. Pulses can be used as functional ingredients to produce nutritious snacks with low allergens, gluten-free, and high in protein, fiber, antioxidants, and micronutrients.

The course focused on how each type of pulse performs in snack extrusion and other applications. Raw material quality, specification and processing variables and their impact on final pulse snack product quality were presented in detail.

Course speakers included: Rachel Carlson, NCI Food Technologist; Natsuki Fujiwara, NCI Food Scientist; David Hahn, Ph.D., NCI Director of Technical Services and Business Development; Clifford Hall, Ph.D., Associate Professor, NDSU School of Food Systems; Gerry Hertzell, Wenger Manufacturing, Inc.; Thunyporn (Naggie) Jeradechachai, NCI Crop Quality Specialist; Kevin McPhee, Ph.D., NDSU Pulse Crop Breeder; Rilie Morgan, NCI Processing Specialist; Juan Osorno, Ph.D., NDSU Dry Edible Bean Breeder; and Brian Plattner, Wenger Manufacturing, Inc.

Pornnicha Sathujarun, Project Manager, AgriSource Co. Ltd., Thailand, commented, "This technical seminar increased the knowledge of all participants on different varieties of U.S. pulses and their applications in

A testimonial from Pete Savage  
Sr. Project Manager Innovation  
Basic American Foods, Blackfoot, Idaho

I had the opportunity to attend the Pulse Ingredient Snack course at NCI in Fargo in June. This course was the first I have attended that focused specifically on pulse products. With the growing trend in health in our nation, our company is trying to focus on healthy ingredients that are high in protein, and this class offered by NCI fit perfectly into our future strategies.

The course speakers in the classroom did a great job covering topics from varietal development to chemical reactions of starches and proteins during processing. Speakers from raw material suppliers and equipment suppliers also contributed greatly to the classroom topics.

But out of everything, two items were exceptional in my opinion:

1) The mix of people attending the course. There were people from all over the world and the USA who were a pleasure to meet and who gave me future contact points.

2) Out of all the extruder courses I have attended, this one had the most hands-on and the greatest amount of time in the lab. The amount of testing and prep NCI put in to show us how ingredients, operating conditions, and the variety of products that can be made was exceptional.

For these two reasons, I would recommend that anyone attend this course when offered. We will be sending others to the class when the opportunity arises in the future.

snacks, milling of pulse flours, pulse product trends, and their effectiveness in extrusion and other snack applications. They also gained hands-on experience in pulse extrusion during workshop demonstrations," she said.

"A visit to a local supermarket and a plant visit in Minnesota also created a great opportunity for them to see various type snack products that are available in the U.S.," she said.

Ms. Sathujarun continued, "After the program was finished, we did a follow up with Mr. Djuli Murtadho, Operational Director of PT. Dua Kelinci. We learned that they are considering producing new extruded snack products, based on U.S. pulses. At this stage, they will be working on and developing multigrain chips, based on NCI recipes, and will discuss with the marketing team the possibility

to launch these new products within next year. His team was very satisfied with this technical workshop and is interested in taking part in our further activities," she concluded.



Rilie Morgan, NCI Processing Specialist, explains the functions of the TX-52 Twin-Screw Extruder.

## Applications of Pulse Ingredients Workshop

Indonesia, Philippines, Singapore, Thailand, USA, Vietnam • October 13-17, 2014

Eighteen Southeast Asian food professionals attended the Applications of Pulse Ingredients Workshop at NCI Oct. 13-17. Participants were from Indonesia, Philippines, Singapore, Thailand, USA, and Vietnam.

The workshop was co-sponsored by the U.S. Department of Agriculture, USA Dry Pea & Lentil Council, and the U.S. Dry Bean Council.

Workshop topics included: quality evaluation; nutritional properties; canning pulses; pulses in bakery and pasta applications; extruded and fried snacks; sensory evaluation; and gluten-free products.

The workshop was led by Thunyaporn Naggie Jeradetchchai, NCI Crop Quality Specialist. Speakers included: Rachel Carlson, NCI; Mackenzie Femreite, USA Dry Pea & Lentil Council; Natsuki Fujiwara, NCI; David Hahn, Ph.D., NCI; Clifford Hall, Ph.D., School of Food Systems, NDSU; Rilie Morgan, NCI; Pornnicha Sathujarun, AgriSource, Thailand.

Several additional speakers also explained local applications of pulses in food products. They included: Chef Haryanto Makmoer, USDA Council of Chefs; Alfi Puruhita, FreSoia; Dr. Chanida Parhotikarn, President of the Thai Dietetic Association; and Surisa Taechawiratchon, Agrisource, Thailand.

SK Food International hosted a tour of their pulse processing facility in Moorhead, Minn.



Participants in the Applications of Pulse Ingredients Course show off the snack products that they made during the class.



NCI staff prepared a large variety of extruded snack products before the course. After the course, participants were able to take a variety of samples back to their company.



2014 Extruded Snacks with Pulse Ingredients course participants



Participants assist with the preparation of extruded pulse snacks.



2014 Applications of Pulse Ingredients Workshop participants

## NCI Hosts 31 Participants at 31st Annual Grain Procurement Course

Belgium, China, Colombia, Egypt, El Salvador, Italy, Japan, Jordan, Kenya, Lebanon, Netherlands, Peru, Philippines, Portugal, Qatar, Saudi Arabia, Spain, Tunisia, USA • September 15-24, 2014

Thirty-one grain buyers came to the Grain Procurement Management for Importers course held in September. They were from 19 countries, the largest group of nations to come to NCI for any course since its beginning in 1983. Course participants were from Belgium, China, Colombia, Egypt, El Salvador, Italy, Japan, Jordan, Kenya, Lebanon, Netherlands, Peru, Philippines, Portugal, Qatar, Saudi Arabia, Spain, Tunisia, and USA.

U.S. Wheat Associates and USDA FAS Cochran Fellowship Program sponsored many of the participants in this course.



Crabtree

John Crabtree, NCI Assistant Director, coordinated the course, which highlights how companies can make more effective purchases while decreasing their financial risk.

"It's interesting that we had 31 participants in our 31st annual Grain Procurement Management course," says Crabtree.

"From the first year that we offered this course until today, grain buying has gone from state trading to almost exclusively private purchasing.

"Large portions of this course are held in the NDSU Commodity Trading Room (CTR), where students learn about electronic trading," he said.

One participant commented, "Certainly this course will benefit my work. In almost every topic, I learned new things. And just being here and speaking with persons in the same field gave me a good idea of how interior sourcing and export handling is being done."

Another participant explained his experience by saying, "I have found the trading game exercises very interesting, and I believe it is a very good idea to increase the number of these games."

On-site tours of the Bill Hejl farm, Amentia, N.D.; Hunter (N.D.) Grain Company; Duluth/Superior Port Facilities; CHS Export Grain Terminal, Superior, Wisc.; Minneapolis (Minn.) Grain Exchange; and the CHS Barge Facility in Savage, Minn., rounded out the course.

William Wilson, Ph.D., NDSU Distinguished Professor Agribusiness

and Applied Economics, was the lead instructor for the course. Wilson



Wilson

developed the course during NCI's first year.

Speakers for the course were: Joe Albrecht, Minneapolis Grain Exchange; David Bullock, Ph.D., AgriBank, FCB; Ryan Caffrey, CHS, Inc.; Dick Carlson, CHS, Inc.; Austin Damiani, Frontier Futures, Inc.; Ron DeJongh, Columbia Grain; Jon Harman, BNSF Railroad; Maurice Hurst, Cargill; Ron Johnson, Duluth Seaway Port Authority; Mike Klein, CHS, Inc.; Wayne Koester, Cargill; Mike Krueger, The Money Farm; Randy Narloch, ADM-Benson Quinn; John Oades, Ph.D., Consultant; Greg Oberle, CHS, Inc.; Frayne Olson, Ph.D., NDSU Extension Service; Jim Peterson, North Dakota Wheat Commission; Paul Skarnagel, Hunter Grain Company; Lynn Thomas, USDA-GIPSA/FGIS; and Ron Johnson, Duluth Seaway Port Authority.



2014 Grain Procurement Management for Importers course participants



Each year, the course participants visit the Duluth-Superior Port Facilities in Duluth, Minn., where their staff provide an overview of the port's operations.

## Rheology Course Focuses on Understanding Wheat and Flour Quality Tests

United Arab Emirates, USA • July 15-17, 2014

Six participants from United Arab Emirates (UAE) and United States attended the Rheology of Wheat and Flour Quality course in July. They learned about wheat quality and how to analyze, interpret, and apply rheological results effectively.

Each participant had the opportunity to gain hands-on experience with the rheological instruments. Hands-on baking sessions helped participants understand the impact of flour quality on baked products and baking performance, and how to perform tests to evaluate the baked product's quality.

The course highlighted tests that reveal dough strength, viscosity, gluten content, falling number, flour color, ash content, moisture, starch damage, and texture analysis. Equipment training included the Buhler lab mill, SD-Matic, Alveograph, Mixolab, RVA, Farinograph, Extensograph, TA-XT Plus, and C-Cell Technology.

"The focus of the course is to help participants who work in the baking and milling industries understand the differences in wheat and flour quality, and how those differences can



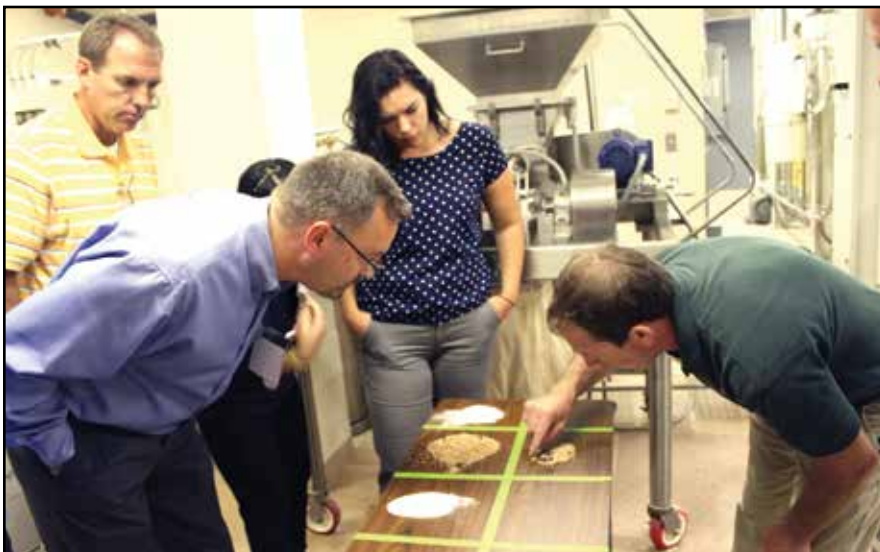
Natsuki Fujiwara, NCI Food Scientist, assists two participants as they run a test for dough strength on the Chopin Alveograph.

affect baking performance," says John Crabtree, NCI Assistant Director.

"Our ultimate goal is to make sure that participants understand the performance of wheat and flour, so they can trouble shoot for their

customers through scientific methods. The underlying theme of this course is customer service as it relates to the baking industry," concludes Crabtree.

Speakers for the course were Rachel Carlson, NCI Food Technologist; Natsuki Fujiwara, NCI Food Scientist; Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist; David Hahn, Ph.D., NCI Director of Technical Services and Business Development; Robert Meyer, Dakota Specialty Milling; and Rilie Morgan, NCI Processing Specialist.



Rilie Morgan, NCI Processing Specialist, demonstrates the different results from milling on the Buhler Lab Mill.



2014 Rheology of Wheat and Flour Quality course participants

# Soybean Procurement Course Draws 38 Buyers from Six Asian Nations

Indonesia, Philippines, Singapore, South Korea, Thailand, Vietnam • September 22-25, 2014

Thirty-eight soybean buyers from six Asian nations learned how to improve their skills in electronic trading while they attended the Soybean Procurement Management for Importers short course at Northern Crops Institute from September 22-25. The participants were from Indonesia, Philippines, Singapore, South Korea, Thailand, and Vietnam.

Sponsors were the U.S. Soybean Export Council (USSEC), North Dakota Soybean Council, Northern Food Grade Soybean Association (NFGSA), and the Minnesota Soybean Research and Promotion Council.

Focus of the course was to learn more about contracting and purchasing U.S. soybeans.

NCI Director Mark Weber coordinated the course.

“The mission of Northern Crops Institute is to educate the world about our region’s crops,” said NCI Director Mark Weber. “Soybeans have become increasingly important as the planted acres in the region multiply each year. Recent studies by the University of Minnesota show that soybeans grown here have a potentially higher feeding value than previously thought,” he said.

“During this course, in addition to learning more about electronic trading skills, we enabled our participants to visit the companies they are buying from and to meet a few of the region’s farmers who produce our soybeans,” concluded Weber.

Diana Beitelspacher, Executive Director of the North Dakota Soybean Council, welcomed the group.

Course instructors were: Gene Griffin, Global Innovative Solutions; Thunyaporn (Naggie) Jeradechachai, NCI Crop Quality Specialist; Mike Krueger, The Money Farm; Frayne Olson, Ph.D., NDSU Extension Service; and William Wilson, Ph.D., NDSU



**A highlight of the course was training in the electronic Commodity Trading Room (CTR), at NDSU’s downtown campus. In this laboratory, students learn how to extract and analyze information, and then make decisions with respect to risk management.**

Dept. of Agribusiness and Applied Economics.

Two panel discussions were presented by soybean processors.

Panelists who discussed growing and handling specialty soybeans were: Scott Sinner, SB&B Foods, Inc.; Matt Bohn, Richland IFC; and Mark Halvorson, SunOpta Company.

Presenting on soybean pricing alternatives and contracts were: Bob and Todd Sinner, SB&B Foods, Inc.; Paul Holmen, Brushvale Seed; Jennifer

Tesch, SK Food International; and Rick Brandenburger, Richland IFC.

Participants were hosted for a barbecue dinner at the Bill and Carolyn Zurn family farm near Callaway, Minn. Carolyn Zurn is the Chair of the Northern Crops Council, the governing board of the NCI, where she represents the Minnesota Soybean Growers Association.

The Food Soybean Team visited several NFGSA suppliers in the region, including the Brushvale Seed, Inc. in Breckenridge, Minn.; Richland IFC, Inc., Dwight, N.D.; SB&B Foods, Casselton, N.D.; SK Food Specialty Processing and SunOpta Company, Moorhead, Minn.

The Feed Team toured the NCI Feed Production Center; Alton Grain Terminal and the Peter Lovas family farm, Hillsboro, N.D.; NDSU Greenhouse Complex; Case IH Plant, Fargo; Colfax Farmers Elevator and the Jay Myers family farm, Colfax, N.D.



**2014 Soybean Procurement Management for Importers course participants**

## Food Barley Course Introduces Japanese to U.S. Barley Industry

Japan • July 30-August 1, 2014

Seven food processors from Japan attended a Food Barley Procurement course customized for the Japanese food industry at NCI July 30-August 1. The course was sponsored by the U.S. Grains Council (USGC). Tommy Hamamoto, USGC Country Director Japan, and Michiyo Hoshizawa, USGC Program and Administrative Manager Japan, accompanied the team.

John Crabtree, NCI Assistant Director, coordinated the course.

The course was designed to introduce the participants to the U.S. food barley industry. Topics at the course included: NDSU barley breeding program; nutritional benefit of food barley; barley grading and specifications; quality characteristics for food use of barley; product trends; barley markets in Japan and the U.S.; food safety; beta-glucan processing; and processing characteristics.

Speakers at the course included: Richard Horsley, Ph.D., Plant Science Dept., NDSU; Joanne Slavin, Ph.D., U of MN; Pat Kehoe, ND Grain Inspection Service; Natsuki Fujiwara, NCI; Steve Edwardson, ND Barley Council; David Hahn, Ph.D., NCI; Jennifer Tesch, SK Food International; Bob Sinner, SB&B Foods, Inc.; Greg Kessel, Arrow K Farms; Tom Jorgens, Polycell Technology; and Roger Hipwell, MGI Grain Processing.

Participants also toured SB&B Foods, Inc, Casselton, N.D., and MGI Grain Processing, East Grand Forks, MN.



During the course, the Japanese Barley team spent time in the NCI Commodity Grading Laboratory learning about U.S. barley quality characteristics.



NCI Assistant Director John Crabtree (standing), who coordinated the course, welcomes the team to Northern Crops Institute.



Pat Kehoe from the ND Grain Inspection Service demonstrates the Boerner grain divider.



2014 Food Barley Procurement course participants



Natsuki Fujiwara, (right), NCI Food Scientist, explains an aspect of barley quality.

## NCI Baking with Soy Courses Highlight Nutritional Benefits of U.S. Soy

Bangladesh and Pakistan • June 16-20, 2014

Burkina Faso and Cote d'Ivoire, Africa • August 25-29

The nutritional benefits of soy protein in baked products were highlighted at two Baking with Soy courses offered this summer. Bakers from Bangladesh and Pakistan came to the course June 16-20, and bakers from Burkina Faso and Cote d'Ivoire, Africa, came to the session August 25-29.

WISHH, The World Initiative for Soy in Human Health, co-sponsored the courses. WISHH is a program of the American Soybean Association (ASA) that brings the nutritional benefits of U.S. soy protein to people in developing countries. The trade-development organization is managed from ASA's world headquarters in Saint Louis, MO. Since U.S. soybean farmers founded WISHH in 2000, it has worked in 24 countries to improve diets and encourage the growth of food industries.

Additional partners for the courses were North Dakota Soybean Council, Minnesota Soybean Research and Promotion Council, CHS, and the United States Department of Agriculture.

The June course participants toured the Ron Mattson farm at Lake Park, Minnesota, hosted by Minnesota Soybean Research & Promotion Council (MSR & PC).

Soybeans have great potential for human food use because of their high level of protein and their functional and nutritional properties. One of the most promising uses of soybeans is



During the August course, NCI Director Mark Weber escorted the group to see the Embden Grain Company. They were hosted by Manager Brad Koetz, (back row, second from left), and also visited the Mark (back row, far left) and Linda Levos farm near Embden, N.D. NCI Director Mark Weber is in the back row, center.

in bakery products. For example, the addition of soy flour to bread products can raise protein content, balance essential amino acids, and increase bread's nutritional value.

"The NCI soy baking courses continue to grow in popularity and we are delighted that customers using soy flour in their food products are requesting that we host the course again," NCI Director Mark Weber says.

"WISHH, along with the U.S. Soybean Export Council (USSEC) and the regional state soybean councils, are our valuable partners in making the courses possible. The high nutritional aspects of soy flour are helping to improve human dietary needs in developing countries of the world and its use in baking products continues to increase," he concludes.

Cote d'Ivoire is about the size of



2014 Baking with Soy course participants from Pakistan and Bangladesh



Participants show off dough from their baking session with Rachel Carlson, NCI baking expert.



2014 Baking with Soy course participants from Burkina Faso and Cote d'Ivoire, Africa



North Dakota, but with a population of 23 million, it exemplifies the importance of using soy flour to help balance human nutritional needs in their country.

With 187 million people, Pakistan is the sixth most populous country in the world. Pakistan's government has already committed to reducing the 'protein gap' in diets, so U.S. soy has an enormous opportunity as both food and feed in Pakistan.

Bangladesh is home to 150 million people, making it the eighth most populous country in the world. Bangladesh has a \$16 billion food retailing sector, and retailing is growing at about 7 percent per year due to both economic growth and urbanization, according to the USDA.

These courses highlighted the use of soy ingredients in baking applications by elaborating physical dough properties, baked product quality, and technical specifications of soy ingredients.

John Crabtree, NCI Assistant Director, coordinated the courses.

Lecturers were Rachel Carlson, Food Technologist; Natsuki Fujiwara, Food Scientist; Thunyaporn Naggie Jeradechachai, Crop Quality Specialist; and Clyde Stauffer, Technical Food Consultants, Cincinnati, Ohio.



This soy-enhanced bread was made during the August Baking with Soy course.

## Wheat Producers Learn More About Wheat and Flour Quality To Be Better Wheat Ambassadors



NCI Food Technologist Rachel Carlson, (far left), leads participants of the Wheat Producers Workshop in comparing bread made from several wheat varieties. Others pictured are (l to r): Neal Fisher, N.D. Wheat Commission Administrator; Clinton Vanneman, S.D. Wheat Commissioner; Greg Svenningsen, N.D. Wheat Commissioner; Mark Jossund, Minn. Wheat Commissioner; and John Crabtree, NCI Assistant Director.

NCI hosted the Wheat Producers Workshop March 10-11 that attracted regional wheat commissioners from three states who learned more about the wheat quality characteristics that end-users need.

According to NCI Director Mark Weber, "This workshop teaches farmer leaders, who will be assuming leadership roles in the various wheat commissions and wheat grower associations, about the basics of wheat and flour quality. By understanding this, they will become better ambassadors for the wheat industry."

Clinton Vanneman, South Dakota Wheat Commissioner, says, "As a

producer, I'm thinking yield. Bakers are thinking quality. Wheat quality is very complex. At this workshop, I learned more about what quality means to bakers and millers in terms of testing, and how that information translates to a good finished product."



Participants of the Wheat Producers Workshop presented in March 2014



Jim Peterson, (left), Marketing Director, N.D. Wheat Commission, and Greg Svenningsen (right), a N.D. wheat producer, mix bread dough during the workshop.

## Buyers Learn More about Managing Supply Chain Challenges at NCI

### Contracting for Wheat Value Workshops

Indonesia, Malaysia, Philippines • September 8-10, 2014

Morocco, Saudi Arabia, United Arab Emirates • October 20-22, 2014

Teams of quality control and purchasing personnel from the Middle East and Southeast Asia attended two Contracting for Wheat Value Workshops at NCI this summer.

The workshops were sponsored by U.S. Wheat Associates (USW) and led by Steve Wirsching, Director of the USW West Coast office. The workshops were coordinated by John Crabtree, NCI Assistant Director.

At the workshops, wheat buyers learn how to better manage supply chains and how to write contracts that accurately specify the wheat they want to purchase. Participants learned about wheat quality testing and procurement through lectures and end-product evaluations.

Topics included U.S. and world wheat market overview; analytical and functionality tests for flour and dough quality; inland logistics; end product evaluations and relationships to physical, chemical, and functional lab tests; wheat class differences and

similarities between U.S. and competitors; developing a wheat value matrix; and purchase quality specifications.

The first team was five buyers from Indonesia, Malaysia, and the Philippines who came to NCI September 8-11. They were accompanied by Michael Spier, Regional Vice President, USW South Asian Region; Joseph Sowers, Assistant Regional Director, USW South Asian Region; and Roy Chung, Bakery Consultant, USW Singapore. In addition to lectures and hands-on baking, the Southeast Asia team toured the Columbia Grain Country Elevator at Valley City, and visited the farm of Greg Svenningsen, rural Valley City.

Five buyers from Morocco, United Arab Emirates, and Saudi Arabia attended the workshop from October 20-24. Ian Flagg, USW Regional Director of the Middle Eastern, East and North African Region, accompanied the team. They also visited Agassiz Valley Grain, Barnesville, Minn., and the Jay

Nord family farm at Wolverton, Minn.

Workshop speakers included: Rachel Carlson, NCI Food Technologist; Randy Cartmill, Vice President and General Manager, Columbia Grain Export Grain Terminal, Portland, Ore.; Roy Chung, USW; Natsuki Fujiwara, NCI Food Scientist; Ian Flagg, USW; Mike Krueger, The Money Farm; John Oades, Ph.D., Consultant; Erica Olson, North Dakota Wheat Commission; Frayne Olson, Ph.D., NDSU Dept. of Agribusiness and Applied Economics; Darrin Rayl, Plant Superintendent, TEMCO, Portland, Ore.; Senay Simsek, Ph.D., NDSU Department of Plant Sciences; Joseph Sowers, USW; Michael Spier, USW; Kim Harper, Federal Grain Inspection Service, Portland, Ore.; William Wilson, Ph.D., NDSU Department of Agribusiness and Applied Economics; Mark Weber, NCI Director; and Steve Wirsching, USW.



David Hahn, Ph.D., NCI Technical Director, discusses wheat quality parameters with workshop participants from Morocco, Saudi Arabia, and United Arab Emirates.



2014 Contracting for Wheat Value Workshop in September



2014 Contracting for Wheat Value Workshop in October

# 2015 COURSE SCHEDULE

**April 14-16 Pasta Production and Technology**  
Registration fee: \$975

**July 21-23 Rheology of Wheat and Flour Quality**  
Registration fee: \$800

**Sept. 14-23 Grain Procurement Management for Importers**  
Registration fee: \$1,500

**Other courses will be added to our schedule as the year progresses. Please check our website--[www.northern-crops.com](http://www.northern-crops.com)--for the most up-to-date information.**

## Koch and Thaler Conduct Weaning Pig Trial in Thailand for USADPLC

Kim Koch, Ph.D., NCI Feed Center Manager, and Robert Thaler, Professor of Animal Science at South Dakota State University, are conducting a weaning pig trial in Thailand for the USA Dry Pea and Lentil Council (USADPLC).

Funding for the project is through the USDA's Export Market Promotion program.

The Bangkok Animal Research Center Company, Ltd., (BARC), will manufacture the diets used in the project and will oversee the feeding trial that is being conducted at a large commercial swine facility.

The research hypothesis is that peas are more easily digested than soybean meal and do not cause an allergic response in the small intestine of swine that may result in stunted villi. The study may discover if the diet leads to greater nutrient uptake, improved growth rates and health.

The study will look at four dietary treatments: 0% pea protein control, and the 5%—10%—15% pea protein inclusions, replacing soybean meal and some other expensive animal protein products.

Koch says, "We believe the effect will carry through to harvest, resulting in a shorter growth period with less feed consumption. This means money savings and increased profits. We also believe this will increase sales of U.S. peas in Southeast Asia.

The study will start in late March and run for 35 days. Small intestinal morphology will be examined weekly from a pig in each dietary treatment. Growth performance data will be available in August.



**Left to right: Saksit Srinongkote, BARC Director; Patrick Brown, AgriSource (USADPLC's representative in Thailand); Dr. Kim Koch; and Ms. Nawarat Semakanit, BARC Researcher, who will be the "boots-on-the-ground" at the swine facility.**

Bangladesh...Belgium  
Burkina Faso...Canada...China...Colombia  
Cote d'Ivoire...Ecuador...Egypt...El Salvador  
Germany...Guatemala...Haiti...Indonesia...Italy  
Japan...Jordan...Kenya...Lebanon...Malaysia...Mexico  
**Buyers from 40 Nations  
Educated by NCI in 2014**  
Morocco...Netherlands...Nigeria...Pakistan...Panama  
Peru...Philippines...Portugal...Qatar...Saudi Arabia  
Singapore...South Korea...Spain...Taiwan  
Thailand...Tunisia...United Arab Emirates  
United States...Vietnam



**Southeast Asia...** Thunyporn Naggie Jeradechachai, NCI Crop Quality Specialist, provided technical consulting for the USA Dry Pea and Lentil Council in Thailand, Singapore, Malaysia, Indonesia and Philippines from March 2-16, 2014. She visited snack makers, bakeries and other food manufacturers to promote the use of pulses and to help provide solutions to their current problems.



## South Korea...

Natsuki Fujiwara, NCI Food Scientist, assisted in implementing the U.S. Grains Council's U.S. barley promotion programs and meetings in Korea December 9-12. The seminars educated 45 R&D personnel from the milling and baking industry, universities, and a public research institute about the quality and uses of U.S. Barley. Byong Ryol Min, USGC Director in Korea, said about Fujiwara's participation, "Your presentations provided the participants with the valuable opportunity to improve their understanding on U.S. food barley market, product trends/pipelines, extruded products, and development of confectionery products."



## Egypt and Jordan...

David Hahn, Ph.D., NCI Director of Business Development and Technical Services, traveled to Jordan and Egypt with U.S. Wheat Associates (USW) for in-plant meetings with major pasta manufacturers and mills. The goal of the activity is to benchmark the industry and identify potential training that USW, in cooperation with NCI, can develop to address technical deficiencies and develop an agenda for a pasta course in 2015 at NCI or at the L'Institut de Formation de l'industrie Meunière (IFIM) in Morocco.





**Japan...** Flour milling executives from three of Japan's leading milling companies came to NCI for a firsthand look at the 2014 wheat crop. The team was hosted by Erica Olson, North Dakota Wheat Commission. "U.S. Wheat Associates (USW) maintains a constant effort to keep Japanese millers and end-users aware of the merits of U.S. wheat," said USW Country Director Wataru Charlie Utsunomiya, based in Tokyo, who escorted the team. "Teams like these allow USW to develop close working relations and mutual reliance between U.S. wheat growers and Japanese millers on a steady supply of high quality wheat," he concluded.



**China...** Kim Koch was in China in November to present feed technology and swine nutrition seminars for USSEC. Here he is pictured with some of the employees of the Aonong Feed Company in Xiamen, China. Koch's host was the Institute of Sub-tropical Agriculture, China.



**Myanmar...** Kim Koch, NCI Feed Center Manager, traveled to Myanmar where he presented at the Myanmar Feed Formulation and Technology workshop. The workshop, held October 13-17 in Yangon, was sponsored by the U.S. Grains Council and the U.S. Soybean Export Council.



**Philippines...** Representatives of five key Philippine milling companies visited NCI in August. All five of the team members hold key management positions in their companies, including marketing, business development, and research and development. The trade visit helped them develop a better understanding of the U.S. hard red spring (HRS) wheat region and the ability of regional producers to provide the quality and supplies they need. Manila-based Joe Sowers, U.S. Wheat Associates (USW) Assistant Regional Director for South Asia, traveled with the team.



**USA...** NCI's Thunyaporn Naggie Jeradechachai and David Hahn, Ph.D., were among the featured speakers at the Culinary Institute of America (CIA) Greystone in St. Helena, CA, at a hands-on product development course featuring pulses and pulse ingredients. Thirty-four food scientists, research and development chefs, nutritionists and marketing representatives attended the symposium. NCI also made extruded ingredients that were used in some of the baking formulations.



**Thailand...** Kim Koch, Ph.D., NCI Feed Center Manager, attended the 2014 VICTAM Asia in Bangkok, Thailand. Here he is pictured with Warren Dominey, who chaired the Aqua and Feed Ingredient Seminars. They have known each other since graduate school in 1988. Dominey recently retired from the Oceanic Institute in Hawaii.



**USA...** Fifty-three representatives from the U.S. wheat industry visited more than 400 wheat fields in North Dakota and South Dakota in July during the Wheat Quality Council's Hard Red Spring and Durum Tour. They gathered at NCI to report their findings to wrap-up the tour.



**Europe...** David Hahn, Ph.D., NCI Director of Business Development and Technical Services, was in Europe to present the quality data for U.S. Wheat Associates about the 2014 HRS and Durum crops. He presented reports to grain buyers, millers, pasta manufacturers and bakers at meetings in Rotterdam, Geneva, Barcelona, Madrid, and Porto. U.S. Wheat staff discussed the current and projected world wheat market and the state of the wheat market in all wheat exporting countries. Much of the discussion was also around how Hahn saw U.S. domestic companies dealing with the quality problems with this year's crop.



**Taiwan...**The Taiwan Flour Millers Team visited NCI to learn more about the 2014 HRS wheat crop. The team was accompanied by U. S. Wheat Associates Taiwan Country Director Ronald Lu. They met with NDSU wheat experts, including HRS breeder Mohamed Mergoum; and DeLane Olsen, HRS Research Specialist. Erica Olsen, N.D. Wheat Commission, presented the 2014 outlook for the U.S. HRS wheat crop.



**Panama...**Managers of Panama flour mills came to NCI to learn more about this year's spring wheat and durum crops and to become more familiar with the U.S. wheat system from farm to mill. While at NCI, the team received an update on the 2014 crop situation, prices and logistics and met with researchers at North Dakota State University to gain a better understanding of the spring wheat and durum quality and breeding programs. The team was escorted by Chad Weigand, Assistant Regional Director for the U.S. Wheat Associates Mexico, Central American, and Caribbean Region.



**USA...**David Hahn, Ph.D., NCI Technical Director, Rachel Carlson, NCI Food Technologist, and Natsuki Fujiwara, NCI Food Scientist, attended the annual meeting of the American Association of Cereal Chemists International in Providence, R.I., in early October. NCI had a booth that was visited by many food processors and former NCI course participants. Next year, AACCI will celebrate its 100th anniversary.



In November, we sadly said goodbye to Thunyporn Naggie Jeradechachai, NCI Crop Quality Specialist, who left us to assume another position in industry. Naggie has done very valuable work in promoting pulses and other crops grown in our region. Naggie, we will miss you and look forward to seeing you soon!



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2014 Annual Update

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- Procurement, Risk Management
- Quality, Processing, and Milling
- Extrusion Technology
- Pasta Processing
- Feed Milling and Manufacturing
- Customized Seminars

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  - Baking
  - Pasta Processing
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  - Post-extrusion
  - Feed
  - Industrial

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- Up-to-date Information
- Fully-equipped Labs
- Hands-on Experiences
- Confidential Environment
- Network of Resources

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 Rachel Carlson, Food Technologist  
 Natsuki Fujiwara, Food Technologist  
 David Hahn, Ph.D., Director of Technical Services and  
 Business Development  
 Kim Koch, Ph.D., Feed Center Manager  
 Rilie Morgan, Processing Specialist

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**Sally Backman**  
 Update Editor

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