

# Northern Crops Institute

## Annual Update

2016

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.



*Connecting in the Global Marketplace*



## Director Report

Mark Weber

We are positioning NCI for the future and we have engaged some of this region’s leading agri-business leaders to help us lay out a strategic plan that capitalizes on our strengths while increasing future marketing opportunities for our high quality crops. They include:



Weber

NCI Chairman Keith Peltier of the Arthur Companies and Proseed, West Fargo, N.D.; Roger Hipwell, MGI Grain Processing, East Grand Forks, Minn.; Mike Krueger, The Money Farm, Fargo, N.D.; Vance Taylor, North Dakota State Mill, Grand Forks, N.D.; Eric Bartsch, AGT Foods, Bismarck, N.D.; Bob Sinner, SB & B Foods, Casselton, N.D.;

Bob Majkrzak, Red River Commodities, West Fargo, N.D.; Dave Katzke, General Mills, Minneapolis, Minn.; John Crabtree, assistant NCI director; and myself.

We have identified several opportunities that we will build on in the near future. Understanding that there is growing uncertainty in future legislative budgets, we will continue to reach out to industry to generate additional fee income for flour milling, food extrusion and processing, baking, analytical, and other technical services that our energetic and experienced team of food technicians and scientists provide.

We have built an aggressive industry marketing effort promoting our technical services. The effort is paying off as we see demand for those services escalating.

We continue to expand our breadth of educational short course offerings teaching customers world-wide how to utilize our northern grown crops in their food and feed products. Even as these opportunities intensify, we have not added any new staff in six years. Future staff retirements will require different skill sets in response to changing demand for services from our customers. As we look into the future we see a need for additional expertise in the areas of risk management, animal nutrition and food processing.

Any business that expects to survive and prosper must embrace change and respond to market conditions quickly. We are responding to new challenges and opportunities in the same way through the help of those dedicated individuals volunteering their time away from their own business in serving the NCI and our mission.

## An Interview with the NCC Chair

Keith Peltier, West Fargo, N.D. — Proseed

### How do you anticipate NCI will continue to promote crops while commodity prices are low and with the current state of over supply?

NCI is committed to promoting crops grown in our region. When prices are low that is when promotion is the most important. NCI will encourage more use in current situations along with advocating and testing for new uses of our northern crops.



Peltier

### How will NCI strengthen partnerships with organizations such as USSEC, U.S. Grains Council, U.S. Wheat Associates and four state commodity organizations etc. to promote our crops?

We are reaching out to our partners to seek new courses to promote our crops and to see if we can encourage new people to attend our courses. We are actively seeking new testing parameters that would promote new uses of the crops we promote.

### What are some new and innovative ways, from both an educational and technical services standpoint, that NCI will be able to promote our crops?

We have been utilizing the Commodity Trading room in our classes. This is one of the premiere teaching tools in the country if not the world. We have been able to leverage our relationship with NDSU to be able to offer this opportunity. In addition, our equipment for testing is state of the art and mirrors the latest in technological developments.

### Do you believe diversity in our crops along with their unique traits will help with long-term goals? If so, how?

The diversity of our crops in this region is one of our strengths. Just the fact that the farmer can have so many choices is good for everybody in the long run.

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## NCI Thanks Outgoing NCC Members for Their Service



NCC Chairman Keith Peltier (left) and NCI Director Mark Weber (right) thanked outgoing NCC board members for their service on the Northern Crops Council (NCC) by presenting them with an engraved clock at the June 2016 meeting. Roger Hipwell (middle), Golden Valley, Minn., represented the MGI Grain Processing LLC, serving one term. Beau Anderson (not pictured), Williston, N.D., finished one term on the NCC by representing the Northern Pulse Growers. Thank you for your service!

# 2017 COURSE SCHEDULE

April 18-20  
Pasta Production and Technology

June 5-10  
NCI-INTSOY

September 11-20  
Grain Procurement Management for Importers

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.

## Connect with us!

Did you know you can connect with NCI in more places than just [northern-crops.com](http://northern-crops.com)? Keep current with what is happening by following, liking and sharing NCI on Facebook, Twitter and YouTube.



## 2016-17 Northern Crops Council (NCC)

**Keith Peltier, Chair**  
West Fargo, N.D.  
Proseed

**Doug Goehring**  
Commissioner of Agriculture  
N.D. Department of Agriculture

**Greg Kessel, Vice Chair**  
Belfield, N.D.  
N.D. Barley Council

**Greg Svenningsen**  
Valley City, N.D.  
N.D. Wheat Commission

**John Bartsch**  
Maple Grove, Minn.  
Kelley Bean

**Ken Grafton, Ph.D.**  
VP Agricultural Affairs  
North Dakota State University

**Dwight Mork**  
Bellingham, Minn.  
Minn. Corn Research and  
Promotion Council

**Vance Taylor**  
Grand Forks, N.D.  
North Dakota Mill  
and Elevator

**Dean Bresciani, Ph.D.**  
Fargo, N.D.  
North Dakota State University

**Justin Halvorson**  
Sheldon, N.D.  
N.D. Corn Growers

**Perry Ostmo**  
Sharon, N.D.  
N.D. Soybean Council

**Chris Westergard**  
Dagmar, Mont.  
Northern Pulse Growers  
Association

**Anthony Chavez**  
Minneapolis, Minn.  
Buhler Inc.

**Randy Hinebauch**  
Chinook, Mont.  
Mont. Wheat & Barley  
Committee

**Drew Parsley**  
Warroad, Minn.  
Minn. Soybean R&P Council

**Arnold Woodbury**  
Wyndmere, N.D.  
N.D. Oilseed Council

**Chet Edinger**  
Mitchell, S.D.  
S.D. Wheat Commission

**Dave Katzke**  
Minneapolis, Minn.  
General Mills

**Todd Sinner**  
Casselton, N.D.  
SB&B Foods

## Thank You

### Thank You to All Who Supported NCI Programs and Activities in 2016

North Dakota State University	Alexis Freier-Johnson	Port of Grays Harbor
Agribusiness and Applied Economics	Dakota Specialty Milling	Leonard Barnes
Frayne Olson, Ph.D.	Robert Meyer	Kayla Dunlap
William Wilson, Ph.D.	Austin Damiani, Commodity Trader	Rahr Malting Co.
Cereal and Food Sciences	De Mari Pasta Dies	Jesse Theis
Clifford Hall, Ph.D.	Gabriele Cannata	Ryan Richard Farm, Horace, N.D.
Plant Sciences	Duluth Seaway Port Authority	Richland Organics Inc.
John Barr	Kate Ferguson	Matt Bohn
Paul Schwarz	Adele Yorde	Rick Brandenburger
Elias Elias, Ph.D.	EGT, LLC	SB&B Foods Inc.
Rich Horsley, Ph.D.	Matt Kerrigan	Robert Sinner
Frank Manthey, Ph.D.	Fargo Brewing Company	Scott Sinner
Juan Osorno, Ph.D.	Chris Anderson	Todd Sinner
Senay Simsek, Ph.D.	Global Innovative Solutions	SK Food International
DeLane Olsen	Gene Griffin	Aaron Skyberg
Kristin Whitney	Bill Hejl Farm, Amenia, N.D.	Joel Owen
Abbiamo Pasta Company	Hunter Grain Company	South Dakota Soybean Processors
Jim Gibbens	Paul Skarnagel	Rodney Fenske
Alton Grain Terminal	Radwan Ibrahim, Consultant	South Dakota State University
Cory Tryan	InfraReady Products Ltd.	Department of Economics
Mark Wild	Mark Pickard	Lisa Elliot, Ph.D.
Ag Processing, Inc. (AGP)	Kansas State University	SunOpta, Inc.
Chris Schaffer	International Grains Program	Mark Halvorson
AGT Foods U.S.A.	Jay O'Neil	Greg Svenningsen Farm, Valley City, N.D.
Mehmet Tulbek	Kelly Bean	The Money Farm, Fargo, N.D.
Eric Bartsch	John Bartsch	Mike Krueger
Axor America, Inc.	Malteurop North America	Luke Swenson
Al Lucia	Mary-Jane Maurice	USA Dry Pea and Lentil Council
Benson-Quinn Co.	Martinson Ag Risk Management	USDA FAS Cochran Fellowship Program
Thomas Lahey	Randy Martinson	USDA/GIPSA/ FGIS
Brushvale Seed Inc.	Minneapolis Grain Exchange	Noah Brook
Paul Holmen	Joe Albrecht	U.S. Dry Bean Council
Jon Miller	Montana State University	Rebecca Bratter
BNSF Railway Inc.	North Dakota Barley Council	Randy Duckworth
Brandon Mortensen	Steve Edwardson	U.S. Grains Council
Buhler, Inc.	North Dakota Grain Inspection Service	U.S. Soybean Export Council
Michael Ehr	Pat Kehoe	Budi Tangendjaja, Ph.D.
Aidin Milani	North Dakota Mill	Basalisa Reas, DVM
Jenni Harrington	Travis Devlin	Tim Loh
Bush Brothers	Vance Taylor	Ratan Sharma
Nathan Kuenkel	North Dakota Soybean Council	U.S. Wheat Associates
Cargill, Inc.	Diana Beitelspacher	Roy Chung
Wayne Koester	Kendall Nichols	Matt Weimar
Katie Jorgenson	Stephanie Sinner	Joe Sowers
CHS, Inc.	North Dakota Wheat Commission	Steve Wirsching
Ryan Caffrey	Neal Fisher	University of Illinois
Mike Klein	Erica Olson	Dept. of Animal Sciences
Greg Oberle	Jim Peterson	Hans Stein, Ph.D.
Dick Carlson	Northarvest Bean Growers	University of Minnesota
Columbia Grain	Northern Pulse Growers Association	Wenger Manufacturing
Darren Bjornson	Shannon Berndt	Gerry Hertzal
Mike Brinda	Philadelphia Macaroni Company	Wheat Value Consulting
Dakota Growers Pasta	Tony Pierce	John Oades, Ph.D.

## The NCI-INTSOY Course - June 5-10, 2017

The Northern Crops Institute (NCI) announces that it will host the 2017 NCI-INTSOY course at its facilities located on the campus of North Dakota State University during the week of June 5-10, 2017. National Soybean Research Laboratory (NSRL) at the University of Illinois has organized and hosted this successful course for many years and is pleased to cooperate with NCI as we take on this new role. NCI will utilize NSRL's expertise as part of the program. The course's educational mission will also essentially remain the same — to expand soybeans in the international marketplace.

Participants can expect to begin the week long course in Minneapolis, Minnesota. They will travel through farm country and visit commercial soymilk and livestock feed processing facilities. Participants will also visit a soybean farm on their trip to NCI and after two days of hands-on labs and lectures at NCI, the group will travel to South Dakota State University in Brookings, South Dakota for an additional day and a half of training and demonstrations. Also included are tours of an innovative aqua-feed research center and a soybean crushing plant. The program concludes with a drive through Minnesota's heartland including an overnight stay and additional site visits on the way back to Minneapolis where participants will depart.

More information including course fee and recommendations will be announced on our website at [northern-crops.com](http://northern-crops.com) in January 2017.

## Thank You

### 2016 Agribusiness Sponsors!

AGT Foods USA  
Ameriflax  
Askegaard Organic Farm  
Bay State Milling Company  
Brushvale Seed Inc.  
Colfax Farmers Elevator  
Columbia Grain  
Dakota Growers Pasta Co., Inc.  
Dakota Specialty Milling  
Sue and Dave Katzke  
Minnesota Corn Growers Association  
North Dakota Corn Utilization Council  
North Dakota Farmers Union  
North Dakota Grain Dealers Association  
North Dakota Grain Growers Association  
North Dakota Mill and Elevator  
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  
U.S. Durum Growers Association  
Weber Farms

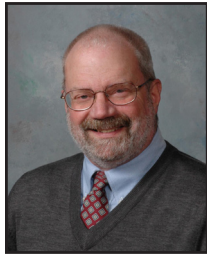


WWW.NORTHERN-CROPS.COM

## A Special Thank You to Our 2016-2017 Funding Partners

Minnesota Department 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  
Northern Food Grade Soybean Association  
Northern Pulse Growers Association  
State of South Dakota  
South Dakota Soybean Research and Promotion Council  
South Dakota Wheat Commission

## Food Safety Modernization Act (FSMA)



Koch

FSMA was enacted to enable the FDA to better protect public health by strengthening the nation's food safety system. Implementation of FSMA regulations

for the nation's food and feed production systems have begun and are continuing with greater frequency as 2016 wraps up and 2017 begins.

The tables, to the right, are broken into Small Business, General and Very Small Business compliance dates. These are FSMA's compliance dates as of June 2016 for animal/human food facilities that manufacture, process, package or hold food intended for consumption by animals or humans in the U.S.

For more information and updates on FSMA, please go to [www.fda.gov/Food/GuidanceRegulation/FSMA/](http://www.fda.gov/Food/GuidanceRegulation/FSMA/).



### Small Business Compliance Dates

Rule	Small Business Definition	Compliance Date
Preventative Controls for Human Food 21-CFR 117	<500 full-time equivalent (FTE) employees	9-18-17
Preventative Controls for Animal Feed 21-CFR 507	<500 FTE employees	9-18-17 for cGMPs and 9-17-18 for PCs
Foreign Supplier Verification Program	N/A	1-26-19
Sanitary Transportation	<500 FTE employees, except that for certain motor vehicle carriers the definition is less than \$27,500,000 in annual receipts	4-6-18

### General Compliance Dates

Rule	Compliance Date
Preventative Controls for Human Food 21-CFR 117	9-19-16 (and 3-17-17 for supply chain program)
Preventative Controls for Animal Feed 21-CFR 507	9-19-16 for cGMPs, 9-18-17 for PCs (except for some suppliers under the supply chain program)
Foreign Supplier Verification Program	Implementation will occur after issuance of Model Accreditation Standards
Sanitary Transportation	4-6-17

### Very Small Business Compliance Dates

Rule	Very Small Business Definition	Compliance Date
Preventative Controls for Human Food 21-CFR 117	<\$1M in sales+market value of food manufactured/processed/packed/held without sale	9-17-15
Preventative Controls for Animal Feed 21-CFR 507	<2.5M in sales+market value of food manufactured/processed/packed/held without sale.	9-17-18 for cGMPs and 9-17-19 for PCs
Foreign Supplier Verification Program	<\$1M	1-26-19

## NCI Technical Staff Attended Baking Courses in Bangkok, Thailand

NCI's Food Technologist Sam Briss and Food Scientist Natsuki Fujiwara attended separate courses at the UFM Baking and Cooking School in Bangkok, Thailand.

Briss attended and completed the six week Baking Science & Technology Course, No. 38. The coursework consisted of group lab practical, exams and dough doctoring workshops in which the instructor created scenarios that could occur in a manufacturing setting and participants found the solution to the baking issue.

Fujiwara attended and completed a two week U.S. Wheat Frozen Dough Course. Participants learned how to produce different types of frozen dough for different bakery products.



Briss holds a recently baked loaf of bread with another participant from the six week Baking Science & Technology Course, No. 38.



Fujiwara (far right) shows recently baked goods with other participants from the two week U.S. Wheat Frozen Dough Course.

## New MASE Soymilk and Tofu Production Equipment Will Assist in the Promotion of Northern Grown Soybeans Worldwide



**Zach Liu, Ph.D., CFS**

Soy milk and tofu are widely consumed in the Orient and are the most recognized soy foods in western countries. North Dakota is a global leader in producing top-quality food-grade soybeans for the world market. Recently, Northern Crops Institute (NCI) installed a pilot-scale soymilk and tofu processing system to promote northern grown soybeans by demonstrating their versatility and quality to international course participants. The system, designed by NCI, consists of several pieces of equipment which are made in Japan, China, India and the U.S. This state-of-the-art system is flexible in its ability to produce soymilk and tofu which are compatible with the differing tastes and cultures from Japan, China and other areas around the world.

The new soymilk and tofu production equipment is best described as a scaled down mimic of large commercial production equipment. It requires only 2 kilograms of soybeans for making tofu and 1.5 kilograms of soybeans for making soymilk. This system will be used for evaluating soybean quality and demonstrating soymilk and tofu production to visitors and international short-course participants. The system will also be used to develop new products and processes for assisting customers of northern grown soybeans.

Soybean foods (including beverages) are becoming popular because of their well-known health benefits. These benefits include, but are not limited to, preventing heart disease, reducing cancer risk, helping

with obesity, aiding bone density and alleviating menopausal symptoms.

Due to these well-known health benefits, global soymilk production has grown rapidly. Traditional soymilk has been described as having a beany flavor. In China, Korea and most Southeast Asian countries, people prefer this flavor. But, in other countries such as India and Japan this beany flavor is a big barrier to consumer acceptance of soymilk. With the new processing equipment, our food scientists now have the capability to make both beany-flavor soymilk and non-beany flavor soymilk.

To explain exactly what soymilk is and how it is processed, it is best to start with the simple definition of what soymilk is. It is a water extract of soybeans. To process soybeans into soymilk the procedure is quite simple. First, dried soybeans need to be soaked in water for several hours. Then, the soaked soybeans are ground with water and the resultant slurry is cooked. Finally, the slurry is filtered to get cooked soymilk.

Tofu is a product based on soymilk. To make tofu, the cooked

soymilk needs to be coagulated by mixing with coagulant or curdling agent such as calcium sulfate. The resultant curd can be directly consumed as pudding or silken tofu. To make regular and firm tofu, the curd needs to be broken and then transferred to a forming box where tofu is firmed and shaped by pressing. Tofu-making was first recorded in the Chinese Han dynasty some 2,000 years ago. There are many different types of tofu and tofu-derived products. With NCI's new system, their food scientists will now have the capability to make all types of tofu products.

NCI and its staff would like to thank the North Dakota Soybean Council and Northern Food Grade Soybean Association for their generous financial and overall support for the purchase and installation of the system. This collaborative effort will assist in expanding northern grown soybeans in the international marketplace.



**In September, the North Dakota Soybean Council visited and toured the NCI. On the tour, Zach Liu, Ph.D., demonstrated the new soymilk and tofu machine.**

## Pasta Production and Technology

Canada, USA • April 12-14, 2016



This short course introduces the fundamental and applied aspects of manufacturing extruded and sheeted pasta products. Participants had the opportunity to process pasta on a hands-on pilot-scale and then they took part in cooking the processed pasta to evaluate the final product. Group activities included an exercise in identifying pasta defects and processing causes and they also had a field trip to a local pasta manufacturer.

## U.S. Agribusiness Partnership Program

Indonesia, Philippines, Thailand, Vietnam • June 13-17, 2016



The program, in addition to providing trade and technical information, emphasized the U.S. Soy Advantage to importers in terms of its sustainable production, efficient and reliable logistic and transportation system, transparent and reliable trade practices, better consistency and quality of product, better value for the dollar, and importance of valuing soy against amino acid and metabolizable energy values as opposed to crude protein.

**The course was sponsored by:**

- USSEC
- United Soybean Board
- American Soybean Association
- Qualified State Soybean Boards - Minnesota, North Dakota, South Dakota and Kentucky

## Utilization of U.S. Wheat Classes in Pasta Production

Angola, Cote d'Ivoire, Ecuador, Haiti, Honduras, Mexico, Nigeria, Panama, Peru, South Africa, USA • July 18-22, 2016



NCI's customized pasta production course assisted pasta processors in creating the right blend of wheat to meet their pasta specifications. Hands-on pasta processing and cooking quality evaluations supplemented course lecture topics which included U.S. wheat supply and price outlook, wheat quality evaluation, and quality tests for flour and semolina.

**The seminar was sponsored by:**

- U.S. Wheat Associates



## South Asian Contracting for Wheat Value

Philippines, Singapore, Thailand, Vietnam • August 1-5, 2016

Quality control and purchasing personnel from South Asia attended the course. At the course, wheat buyers learned how to better manage supply chains and how to write contracts that accurately specify the wheat they want to purchase. The participants learned about wheat quality testing and procurement through lectures and end-product evaluations.

The course was sponsored by:

- U.S. Wheat Associates



## Grain Procurement Management for Importers

Algeria, China, Ecuador, Egypt, Italy, Kuwait, Morocco, Panama, Peru, Philippines, Poland, Saudi Arabia, Singapore, United Arab Emirates, USA, Venezuela • September 12-21, 2016

NCI welcomed 25 participants from 16 countries to the Grain Procurement Management for Importers Course. The course highlights how companies can make effective purchases while managing their financial risk.

The course was sponsored by:

- U.S. Wheat Associates
- U.S. Grains Council
- U.S. Department of Agriculture FAS Cochran Fellowship Program



## Dry Edible Beans as Food Ingredients

Argentina, Brazil, India, Indonesia, Italy, Malaysia, Philippines, Singapore, Thailand, Vietnam • September 19-20, 2016

NCI welcomed 22 participants from 10 countries for the Dry Edible Beans as Food Ingredients Course in mid-September. There was a broad range of course topics including industrial processing of canned beans and processing beans into flour to enhance pulse snack extrusion, baking and pasta applications.

The course was sponsored by:

- U.S. Dry Bean Council



## Barley & Malt Quality: Field to Brewhouse Perspective

United States • October 3-6, 2016



Barley and Malt Quality: Field to Brewhouse Perspective course was held at NCI in October. NDSU Plant Sciences and Institute of Barley and Malt Sciences coordinated the course. There were lectures, discussion sessions and laboratory demonstrations that provided participants with knowledge to understand malt processing and to effectively interpret barley and malt analyses.

## Soybean Procurement Management for Importers

India, South Korea • October 10-14, 2016



NCI hosted the Soybean Procurement Management for Importers Course to provide food grade soybean buyers with the latest risk management tools for procuring food grade soybeans from this region, and a better understanding of food grade soybeans as it relates to handling, storage, transportation and quality characteristics.

**The course was sponsored by:**

- Minnesota Soybean Research and Promotion Council
- North Dakota Soybean Council
- Northern Food Grade Soybean Association
- U.S. Soybean Export Council

## Applications of U.S. Pulse Ingredients

United States • October 17-21, 2016



This customized course focused on major applications of using pulses as an ingredient. Emphasis was placed on bakery products, pasta and both extruded and fried snacks. Nutritional properties were also highlighted during the course.

**The course was sponsored by:**

- USA Dry Pea & Lentil Council

Algeria...Angola  
 Argentina...Brazil...Canada  
 China...Colombia...Cote d'Ivoire...Ecuador  
 Egypt...Honduras...India...Indonesia...Italy...Japan  
 Kuwait...Malaysia...Mexico...Morocco  
**Buyers from 37 Nations  
 Educated by NCI in 2016**  
 Myanmar...Nigeria...Panama...Peru  
 Philippines...Poland...Saudi Arabia...Singapore  
 South Africa...South Korea...Taiwan...Thailand  
 United Arab Emirates...United States  
 Venezuela...Vietnam



**Morocco** | March 6-11, 2016

Feed Production Center Manager Kim Koch, Ph.D. was in Morocco to attend the "Third USSEC Poultry Round Table for the Feed Industry of the Maghreb (North Africa)." There were approximately 60 people that attended the meeting. The picture above is of Kim Koch, Ph.D. and Khalid Benabdeljelil, contractor, North Africa for the U.S. Soybean Export Council (USSEC).



**China** | April 11-15, 2016

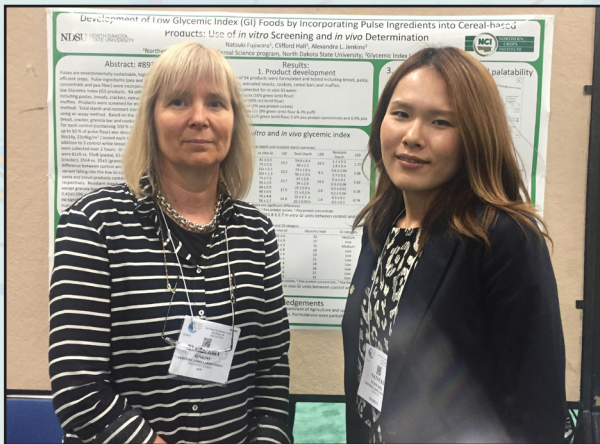
Food Scientist Zach Liu, Ph.D., CFS attended the 6<sup>th</sup> Annual China International Exhibition for Soyfood Processing Technology and Equipment and also the 4<sup>th</sup> Annual China International Soyfood Industry Development Conference held in Shanghai, China. During the conference Dr. Liu successfully delivered a one hour presentation titled "Importance of Soy Characteristics in Soyfood Processing - Introduction of North Dakota IP Soybeans." Dr. Liu represented NCI through the 2016 China Trade Mission group organized by the North Dakota Trade Office.



**Guatemala** | April 18-22, 2016

Natsuki Fujiwara attended a "Value-Added Foods with Bean Derivatives" seminar along with a hands-on baking demonstration in Guatemala City on April 19-20. It was hosted by the US Dry Bean Council. Participants from Central America learned about value-added applications of beans and also spent a day in the kitchen making products with bean flour.

# Global Marketing



## USA | April 2-6, 2016

Natsuki Fujiwara attended the Experimental Biology Conference 2016 in San Diego, Calif. The conference brought together approximately 20,000 professionals and exhibitors. Fujiwara presented her poster, "Development of low glycemic index foods by incorporating pulse Ingredients into cereal-based products: Use of in vitro screening and in vivo determination." Alexandra Jenkins from Glycemic Index Laboratory, Inc., is listed as a coauthor and was also at the conference.



## USA | April 21, 2016

Feed Production Center Manager Kim Koch, Ph.D. was in Kansas City, Missouri at the Pet Food Forum. He assisted the Northern Pulse Growers Association in their booth with technical questions. There were a record number of attendees and exhibitors at the Forum and the exhibition space sold out for the third year in a row.



## Myanmar | May 14-21, 2016

Food Scientist Zach Liu, Ph.D., CFS traveled to Myanmar to promote the use of U.S. food grade soybean protein ingredients. During the trip he visited three local companies that are currently producing or interested in producing soy-based beverages. Dr. Liu also delivered a 90 minute presentation at the Food Science Technology Association of Myanmar (FOSTA). The trip was organized by World Initiative for Soy in Human Health (WISHH/American Soybean Association) and was also financially supported by the North Dakota Soybean Council.



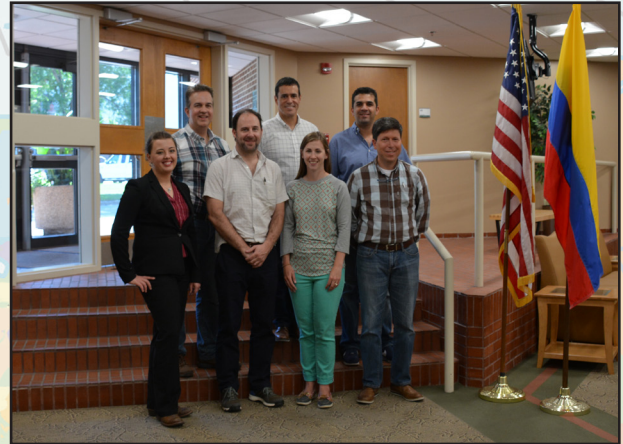
## Southeast Asia | May 23-31, 2016

Dr. Frayne Olson, NDSU Department of Agribusiness & Applied Economics Crops Economist & Marketing Specialist was in Jakarta, Indonesia, Bangkok, Thailand and Manila, Philippines as part of the "Managing Risk and Profitability from Field to Food" meeting series. The meeting series was sponsored in part by NCI, Minnesota Soybean and the North Dakota Soybean Council. The program participants were buyers of U.S. soybeans and soybean meal. Most were soybean processors, feed millers and feed merchandisers. The meeting series focused on understanding the U.S. grain marketing system, with special emphasis on price risk management (i.e. futures markets, hedging and options).



## Africa | June 20, 2016

NCI welcomed the Regional African Trade and U.S. Quality Assessment Team to NCI in June. Participants were from Ghana, Nigeria and South Africa. The team was hosted by the North Dakota Wheat Commission and Minnesota Association of Wheat Growers. They were at NCI to hear presentations and then the next day they toured a country elevator (the North Dakota Mill and Elevator) and they also toured the Alton Grain Terminal near Hillsboro, N.D.



## Colombia | July 25, 2016

In July, NCI welcomed a Colombian Wheat Trade Mission Team. The team members were comprised of high level executives of the major flour, cookie and pasta groups from Colombia. The team was sponsored by U.S. Wheat Associates and USDA's Foreign Agricultural Service (FAS) and in cooperation with the North Dakota Wheat Commission along with many other state's wheat groups.



## Singapore | August 13-20, 2016

NCI's Food Scientist Zach Liu, Ph.D., CFS presented at the South East Asia Soymilk Workshop organized by U.S. Soybean Export Council (USSEC) in Singapore. Zach presented on soybean variety, composition and storage. There were approximately 40 attendants who were from soymilk and tofu manufacturers in South East Asia. Dr. Liu's successful presentation and consultation lasted approximately 100 minutes and there many questions from the participants of the workshop.



## Indonesia | August 18, 2016

In August, NCI welcomed the Indonesian Trade Team. The team was sponsored by U.S. Wheat Associates and hosted by North Dakota Wheat Commission.

# Global Marketing



## Myanmar | August 25, 2016

At the end of August, NCI welcomed the Myanmar Trade Team sponsored by the American Soybean Association and WISHH. The team consisted mainly of oilseed processors. They also visited a soybean farm and a grain elevator, attended a session at NCI and also participated in the Global Trade Exchange in Indianapolis, Indiana.



## India | August 25 - September 2, 2016

Feed Production Center Manager Kim Koch, Ph.D. was one of three lead instructors for the Center for Executive Education's "FSPCA Preventative Controls for Human Food Course" sponsored by Cornell University - College of Agriculture and Life Sciences. Dr. Koch reported that it was well attended with 21 participants in the first part of the week and 30 participants towards the end of the week.



## Japan, South Korea, Taiwan | September 12, 2016

In September, NCI welcomed the Food Barley Trade Team. The trade team was from Japan, South Korea and Taiwan. They were hosted by the North Dakota Barley Council.



## Tunisia | September 26, 2016

We had a group of agriculture officials sponsored by the University of Minnesota Extension that were visiting from Tunisia. They took a tour of NCI and then they also visited other agricultural places of interest in the Fargo, N.D. area.



## Philippines | October 4, 2016

The North Dakota Wheat Commission brought the Philippine Foremost Team to NCI for a tour of the facility. After the tour, the team headed to the Bagg Bonanza Farm in Mooreton, N.D. and also had a farm visit and tour.



## Japan | October 26, 2016

NCI welcomed the Japanese Trade Team Showa Sangyo to our facility at the end of October. The trade team was sponsored by the North Dakota Wheat Commission.



## Japan, South Korea,

## Taiwan | November 7-11, 2016

Food Scientist Natsuki Fujiwara traveled to Japan, South Korea and Taiwan in the beginning of November to assess the market potential for food barley. The team met with key staff in each company.



## Colombia | November 14-18, 2016

Food Scientist Natsuki Fujiwara spoke at educational seminars for health professionals as a means to increase bean consumption in Bogota, Colombia. Fujiwara also had a technical seminar in Medellin, Colombia for culinary and technical professionals.



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2016 Annual Update

*Offering Technical Services and Educational Opportunities*

**Educational Courses:**

- Value-enhanced uses
- Grain standards and inspection
- Procurement, risk management
- Quality, processing and milling
- Extrusion technology
- Pasta processing
- Feed milling and manufacturing
- Customized seminars

**Technical Services:**

- Pilot-Scale Processing**
- Milling
  - Baking
  - Pasta processing
  - Oilseed cold pressing
  - Extrusion
  - Post-extrusion
  - Feed
  - Industrial

**NCI Provides:**

- Skilled staff
- Up-to-date information
- Fully-equipped labs
- Hands-on experience
- Extrusion
- Confidential environment
- Network of resources

**NCI Staff**

Mark Weber, director  
 John Crabtree, assistant director  
 Linda Briggs, office manager  
 Betsy Armour, communications/public relations manager  
 Janel Brooks, account technician  
 Neil C. Doty, Ph.D., technical director (consultant)  
 Kim Koch, Ph.D., feed production center manager  
 Natsuki Fujiwara, food scientist  
 Rachel Carlson, food technologist  
 Sam Briss, food technologist  
 Rilie Morgan, process project manager  
 Zhisheng (Zach) Liu, Ph.D., CFS, food scientist

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