

# Northern Crops Institute

## Spring Update

www.northern-crops.com

Spring 2008

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.

## Brian Sorenson Named NCI Director

### Search Underway for New Technical Director

Brian Sorenson, NCI's technical director since 2001, took the helm of Northern Crops Institute (NCI) in January. Sorenson replaces Dr. Patricia Berglund, who retired as director in early December 2007.



Sorenson

"I am extremely excited to be selected as the new NCI director, and I look forward to working with our partners in industry to promote the crops from our region," Sorenson says.

"NCI plays a key role in the success of northern Great Plains agriculture," says Laird Larson of Clark, S.D., chair of the Northern Crops Council (NCC), NCI's governing body. "The Northern Crops Council is excited about the leadership Brian will provide as we all find new and innovative strategies to enhance uses and markets for our products."

"Brian is well-known and respected by industry leaders throughout the region, the nation and the world," says Dr. D.C. Coston, NDSU's vice president for Agriculture and University Extension. "We look forward to the new directions NCI will take in conjunction with many partners,

including NDSU's outstanding faculty and staff, in enhancing the economy of this region."

Sorenson has more than 18 years of experience in food product and process development and is an expert in the quality and utilization of U.S. durum and hard red spring wheat, and pasta production and quality. Prior to joining NCI, he served as research project manager for Purina Mills Inc. in St. Louis, Mo., and processing consultant for Format International Ltd., St. Louis.

Since 2000, he also has been a North Dakota State University Extension Service wheat quality specialist.

Sorenson earned a master of science degree in cereal chemistry from NDSU.

"I am excited about what NCI will accomplish under Brian's leadership," says Jennifer Tesch, marketing director for SK Food International Inc., Fargo; past chair of the NCC; and chair of the search committee to find Berglund's replacement. "Our company, along with many other companies and producers, will continue to benefit from the outstanding work of NCI."

A search is underway to hire NCI's new technical director. Review of applications begins April 1.

## NCI Offers Diverse 2008 Short Course Schedule to Address Industry Trends

"Our 2008 short course schedule is probably the broadest spectrum of courses that we've ever offered at Northern Crops Institute," says John Crabtree, NCI Assistant Director.

"The courses address a diversity of crops and issues that are pertinent to the industry. Flaxseed, distillers grains, food-grade soybeans, pulses, and whole grain foods are all hot topics. The industry is looking for strategies on how to keep input costs down and for different ingredients for products. It's an exciting time in agriculture," Crabtree says.

In addition to specialty courses, NCI also offers an array of 'regulars' each year, such as pasta production, basic and advanced grain procurement, and barley malt quality evaluation.

*See page two for NCI's 2008 short course schedule.*



Crabtree

## Remembering Matt Mechtel... Former NCI Board Chair and Soybean Advocate

Matt Mechtel, chair of the Northern Crops Council (NCC) from 2005-2006, died on February 21 at his farm near Page, N.D. He served on the Northern Crops Council from 2000 to 2006, representing the North Dakota Soybean Council.

"Matt Mechtel was an advocate for soybeans and NCI programs," says Pat Berglund, NCI Director during Mechtel's years of NCC participation.

"As a result of his leadership, NCI has grown its technical soybean programs and reached many new international and U.S. soybean buyers. We will miss Matt's enthusiastic and thoughtful leadership."

Matt operated a large corn and soybean farm and was very active in commodity promotional efforts and regional agriculture. He was 39 years old.



Mechtel

Connecting in the Global Marketplace



# 2008 Short Courses

Visit [www.northern-crops.com](http://www.northern-crops.com) for registration forms and more information.

**March 24-26 Flaxseed: Adding Functional Food Value**  
Nutritional benefits, quality, milling, storage stability and utilization of milled flaxseed in bread, pasta, noodles, extruded snack products and sensory properties in food systems. Hands-on experience in NCI's grain grading, analytical, baking and processing laboratories.

**April 15-17 Pasta Production and Technology**  
Fundamental and applied aspects of manufacturing extruded pasta products. Raw material quality criteria, specifications, and processing variables and their impact on final pasta product quality are presented in detail. Lectures are supplemented with pilot-scale processing of traditional extruded pasta products. Quality tests demonstrated.

**April 22-23 DDGs and Pellet Manufacturing**  
Highlights pelleting of distillers grains alone and in combination with complementary ingredients. Topics include physical characteristics of distillers grains; pellet mill operation and pellet quality; complementary ingredients; and hands-on pellet production. Co-sponsored by the American Feed Industry Association.

**April 28-May 2 Dairy Feed Manufacturing (Int'l.)**  
By invitation.

**May 12-16 Advanced Grain Procurement Strategies**  
Risk management tools and marketing strategies to assist buyers competing in the international grain business. Intended for experienced grain buyers well versed in grain marketing, or with a basic understanding of commodity merchandising principles. Trading games and case studies.

**June 2-6 Baking with Soy**  
Highlights the use of soy ingredients in baking applications, physical dough properties, baked product quality, technical specifications of soy ingredients, and regulations and health claim issues in U.S. Hands-on experience in NCI's baking laboratory.

**July 14-18 Pasta: Raw Materials and Processing (Int'l.)**  
Focuses on the raw materials and processes used in the production of traditional dried pasta. Quality characteristics, nutrition, durum milling, commercial pasta production, functional and non-traditional ingredients, physical and rheological tests, pasta quality evaluation. Hands-on pasta processing. Tours of area pasta manufacturing plant and supermarkets.

**July 28-Aug. 1 Baking with Soy**  
Repeat of June 2-6 short course.

**Aug. 5-7 Pulse Quality and Utilization**  
Highlights pulse breeding, nutritional benefits of pulses, sourcing pulses, pulse quality evaluation, milling of pulses, utilization of pulses in food systems (bread, pasta, soup, extruded snacks and canned products). Lectures will be supplemented by hands-on experience in NCI's grain grading, analytical, baking and processing laboratories.

**Aug. 19-22 Barley Malt Quality Evaluation**  
Designed to assist malting and brewing staff in rounding out their knowledge of various quality tests and biochemical processes associated with the production of malt and beer. Laboratory and greenhouse demonstrations will address barley breeding, gene mapping, malt analysis, and pilot brewing. Participants will tour a local malt plant and elevator to observe their barley handling. Co-sponsored by the American Society of Brewing Chemists.

**Sept. 8-17 Grain Procurement Management for Importers**  
Focuses on the mechanics of grain merchandising. Academic and commodity trade authorities will lecture on cash and futures markets. Grain merchandisers will guide class through the full complexity of the international grain markets. Seminars will be presented by grain merchandisers at the Minneapolis Grain Exchange. The class will also have on-site visits to a country elevator, an export grain terminal, and a barge facility.

**Oct. 7-9 Feed Safety: Managing a HACCP Program**  
Gain an understanding of what feed safety systems can and cannot do, and which system is best suited to your needs. Reviewing the status of the FDA Amendments Act, current US domestic federal regulations and EU requirements will place feed manufacturers in a proactive mode leading to reduced liability risk, improved public perception and greater consumer confidence. Co-sponsored by the American Feed Industry Association.

**Oct. 21-22 DDGs and Pellet Manufacturing**  
Repeat of April 22-23 short course.

**Oct. 28-30 Exploring Whole Grain Foods**  
Whole grain consumption has increased significantly and is projected to be a major segment in the food industry. This course will provide an insight into processing, sourcing and functionality of whole grain ingredients. Course lectures will be supplemented by hands-on experience in NCI's analytical and processing laboratories.

**Date Not Set Pea Flour Utilization in Pasta and Noodles**  
Co-sponsored by USA Dry Pea and Lentil Council.



NCI's new email address:  
nci@ndsu.edu

## Tulbek Presents at Pea Flour Milling Techniques Short Course in Thailand

Dr. Mehmet Tulbek, NCI Pulse and Oilseed Specialist, traveled to Thailand to present a series of technical presentations during the Pea Flour Milling Techniques Short Course, sponsored by USA Dry Pea and Lentil Council (USADPLC), January 28-31, 2008.



**Tulbek**

“Southeast Asia is a growing market for U.S. dry peas, primarily for extruded snacks and fried peas. The quality of milled pea flour is essential for the end product attributes, which we discussed extensively during the program,” Tulbek says.

Twenty-two participants from Thailand, Indonesia, Malaysia, Philippines and Vietnam attended the program.

The short course was organized by USADPLC area representatives Mr. Tim Welsh, Ms. Katanchalee Kaewmanee (Dew) and Dr. Dee Richmond.

Topics in the course included an overview of the 2007 U.S. dry pea quality survey, dry pea flour milling techniques, flour specifications, precooked pea flour production, nutritional attributes of dry pea flour, pea flour utilization, pin milling and fractionation issues.

Participants also attended demonstrations on pea flour milling, particle size evaluation, RVA and rheological tests at Kasetsart University Institute of Food Research and Product Development and Food Science & Technology Lab (IFRPD).



**Participants observe particle-size distribution testing at IFRPD during the Pea Flour Milling Techniques Short Course in Thailand.**

## Super Feed Concept Adds Value and Marketability to Regional Crops

“North Dakota produces 27 times more feed than we can use locally with the number of livestock that we have in the state,” says Dr. Vern Anderson, Animal Scientist at the Carrington, N.D., Research Extension Center (REC). “In order to sell our feed in the world marketplace, it needs to be differentiated.”

This need resulted in studies of co-product combination feeds or what Anderson calls “super” feeds at the Carrington REC and NCI’s Feed Production Center. The research, headed up by Anderson and Dr. Kim Koch, manager at the NCI Feed Center, suggests that pelleted compound feeds can be made for specific purposes by developing formulations from different combinations of co-products and grains with complementary nutritional profiles.



**Koch**

One study arose from a request by Dakota Growers Pasta Company for a value-added use for wheat midds, a by-product of semolina milling. Koch and Anderson formulated multiple compound feeds with combinations of wheat midds, distillers grains, and peas. Steers fed at the Carrington REC to market weight using the formulations had excellent weight gain and improved carcass value.

“This project is a great example of how NCI, Carrington REC, NDSU, and processors work together to try to solve a problem to the advantage of livestock producers,” says Koch.

## MSGA President’s Award Presented to Berglund at Annual Growers Meeting

The Minnesota Soybean Growers Association (MSGA) presented the President’s Award to Pat Berglund, former NCI director, at their annual meeting in January.

“This year’s recipient is an individual who has been an exceptional resource to MSGA,” said President Lance Peterson during his remarks. “Throughout her career, Pat Berglund has made a great impact, not only within the regional agricultural community, but also on national and international levels. She literally helped connect the fields of the Midwest with grain buyers, processors, and consumers throughout the world.”

“Without the financial support and partnership with MSGA, the soybean programs conducted by the NCI would not have been possible,” responded Berglund in her letter of acceptance. “Over the past several years, because of your financial support, NCI has become a Center of Excellence for Baking with Soy, conducting several programs in 2007 and with funding commitment for an additional 2008 program.”



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## Offering Technical Services and Educational Opportunities

### Educational Courses:

- Baking
- Extrusion Technology
- Feed Milling and Manufacturing
- Grain Standards and Inspection
- Pasta Processing
- Procurement, Risk Management
- Quality, Processing, and Milling
- Value-Enhanced Uses
- Customized Seminars

### Technical Services:

- Pilot-Scale Processing
- Baking
  - Extrusion
  - Feed
  - Industrial
  - Milling
  - Post-extrusion

### NCI can provide:

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

*Connecting in the Global Marketplace*

### NCI Staff

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