

## Experiment Station

Blaine Schatz	Director/Agronomist
Mike Ostlie	Research Agronomist
Michael Wunsch	Plant Pathologist
Jasper Teboh	Soil Scientist
Paulo Flores	Precision Agriculture Spec.
Uchenna Anele	Animal Scientist
Steve Zwinger	Research Spec./Agronomy
David Copenhaver	Research Spec./Seedstocks
Ezra Aberle	Research Spec./Agronomy
Chanda Engel	Research Spec./Livestock
Szilvia Yuja	Research Spec./Soils
Suanne Kallis	Research Spec./Pathology
Mark Halvorson	Seasonal Research Assist./Agronomy
Kathy Wiederholt	Fruit Project Manager
Todd Ingebretson	Research Tech./Agronomy
Tim Indergaard	Research Tech./Agronomy
Steve Schaubert	Research Tech./Agronomy
Tim Schroeder	Research Tech./Livestock
Rick Richter	Research Tech./Seedstocks
Scott Fetch	Research Tech./Seedstocks
Billy Kraft	Research Tech./Pathology
Chad Richter	Research Tech./Seedstocks
Tom Smith	Research Tech./Agronomy
Dave Widmer	Research Tech./Agronomy
Kelly Bjerke	Laboratory Technician
Cassidy VandeHoven	Laboratory Technician
Myrna Friedt	Administrative Assistant

## Extension Service

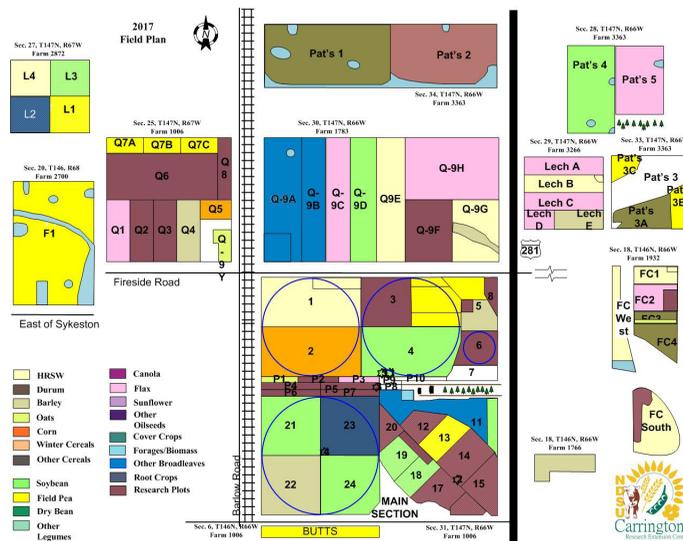
Greg Endres	Area Specialist/Cropping Systems
Karl Hoppe	Area Specialist/Livestock Systems
Paulo Flores	Precision Agriculture Spec.
Mary Berg	Environmental Mgmt. Spec.
Linda Schuster	Administrative Secretary

## Farm Business Management/ND Forest Service

Jory Hansen	Instructor/Coordinator
Steve Metzger	Instructor (part-time)
Gerri Makay	Community Forestry Spec.

## Advisory Board

Duane Burchill Sr.	Barnes County
Mark Williams	Benson County
Bruce Bachmeier	Carrington
(Open)	Dickey County
Monty Schaefer	Eddy County
(Open)	Emmons County
Justin Topp	Foster County
Steve Metzger	Garrison Diversion Cons. Dist.
Kelly Klosterman	Garrison Diversion Cons. Dist.
Dennis Haugen	Griggs County
Justin Olson	Kidder County
Lowell Berntson	LaMoure County
Tommy Gross	Logan County
Sandy Werth	McIntoch County
Mike Huebner	Stutsman County
Kurt Bollingberg	Wells County



Beyond the field research projects that are being discussed during today's field tour, the CREC crops and soils research program conducts projects related to variety development and evaluation, plant disease management, soil fertility and crop nutrition, weed/herbicide management, crop rotation, saline soils and many other factors that limit crop performance. Crops utilized in these investigations include:

Alfalfa	Barley
Buckwheat	Canola
Carinata	Chickpea
Corn	Cowpea
Dry Bean	Durum
Einkorn	Emmer
Fababeans	Field Pea
Flax	Forages
Lentil	Lupin
Mustard	Oats
Potato	Proso Millet
Rye	Safflower
Grain Sorghum	Soybean
Spelt	Sugarbeets
Sunflower	Triticale
Spring Wheat	Winter Wheat
and others	

During this growing season there are over 350 different agronomy research projects being conducted at on-station and off-station sites.

- 1 ND VitPro HRSW/seedstocks/Research plots
- 2 Corn/silage
- 3 Research plots/Navarro/Orka/Petite Field Pea/seedstocks
- 4 Soybean/seedstocks/Research plots
- 5 MP1907 Field Pea/Tradition Barley/seedstocks/Research Plots
- 6-8 Research plots
- 11 Manor Buckwheat/Soybean/seedstocks
- 12 Research plots
- 13 Field Pea/seedstocks
- 14-17 Research plots
- 18-20 Soybean/seedstocks/Research plots
- 21 ND Stutsman Soybean/seedstocks
- 22 Tradition Barley/seedstocks
- 23 FanFare Faba Bean/seedstocks
- 24 ND Benson Soybean/seedstocks
- Butts LG Koda Field Pea/seedstocks
- P-1 Lusistitin Oat/seedstocks
- P-2 Research plots
- P-3 York Flax/seedstocks
- P-4-10 Research plots
- Q1 York Flax/seedstocks
- Q2-3 Research plots
- Q4-5 Forage barley/Corn/silage
- Q6 Cropping Systems
- Q7A Flute Field Pea/seedstocks
- Q7B-C Fiddle/Banjo Field Pea/seedstocks
- QY Oat/seedstocks
- Q9A-B Manor Buckwheat/seedstocks
- Q9C Omega Flax/seedstocks
- Q9D ND Benson/ND Stutsman Soybean/seedstocks
- Q9E ND VitPro HRSW/seedstocks
- Q9F Research plots
- Q9G Lang MN HRSW/ND VitPro HRSW/seedstocks
- Q9H York Flax/seedstocks
- F1 Salamanca/Shamrock Field Pea/seedstocks
- FCW-1 Shelly HRSW/Lang MN HRSW/seedstocks
- FC2 Omega Flax/seedstocks/Research plots
- FC3-4 Joppa Durum/Oat/seedstocks
- FCS ND VitPro HRSW/seedstocks/Research plots
- Pats1 Joppa/Divide Durum/seedstocks
- Pats2 ND Dylan Winter Rye/seedstocks
- Pats3 Divide Durum/Gunner/Mystique Field Pea/seedstocks
- Pats4 Soybean/seedstocks
- Pats5 York Flax/seedstocks
- L1 Nette Field Pea/seedstocks
- L2 Boxer Faba Bean/seedstocks
- L3 Soybean/seedstocks
- L4 Lang MN HRSW/seedstocks
- LechA Omega Flax/seedstocks
- LechB Shelly HRSW/seedstocks
- LechC Omega Flax/seedstocks/Research plots
- LechD Omega Flax/seedstocks
- LechE Tradition Barley/seedstocks

## NDSU Carrington Research Extension Center



### 58th Annual Field Day Tuesday, July 18, 2017

9:00 a.m. - refreshments

Welcome

**Dr. Ken Grafton**  
**Blaine G. Schatz**

9:30 a.m. - noon - morning tours

Noon - 1 p.m. - meal

1:00 p.m. - 3:30 p.m. - afternoon tours

Mission: To conduct research that will lead to the enhancement of agriculture and improve the quality of life across the central region of North Dakota. Research effort focuses on dryland and irrigated crop production practices, crop germplasm evaluation and improvement, crop fertility and crop nutrition, soil health and resource improvement, plant disease control and management, evaluation of new agricultural technologies, cropping systems and crop rotation research, precision agricultural practices, crop-livestock nutrient management, integration of crop and livestock production, beef cattle feeding, feedlot management, intensive cow/calf production, growing and finishing traits, carcass data and meat quality, sustainable agriculture practices, foundation seedstocks production, horticulture and forestry evaluations, and fruit and berry production. The central location of the Carrington Center is significant in that research programs address research needs representing a significant part of agriculture in North Dakota. The objective is to discover the balance between profitability and conservation of the natural resource base.

**Morning Tour Options  
9:30 to 12:00 (attend one)**

**Tour A - Crop Variety and Research Review**

*Host - Ezra Aberle/Kelly Bjerke*

**Dry Bean Variety and Research Update -**  
Greg Endres  
**Soybean Variety Update/Research Projects/Cultivar Traits -** Mike Ostlie



**Corn Production Current Status and Management/Research Projects -**  
Joel Ransom/Paulo Flores  
**Spring Wheat Variety and Research Update -** Andrew Green/Blaine G. Schatz  
**Canola and Carinata Research Project Status -** Bryan Hanson/Mike Ostlie

**Tour B - Livestock Production Review**

*Host - Mary Berg*

**Rye Forage for Cattle -** Chanda Engel

- ✘ Results of Rye Silage Feedlot Trial
- ✘ Swath Grazing German Millet after Rye Harvest
- ✘ Double Cropping Rye with Barley for Forage



**Corn Silage Sampling Project -**  
Carl Dahlen

**Feed Additives for Enhancing Rumen Fermentation -** Uchenna Anele

**Drylot Cow-Calf Production -** Chanda Engel  
✘ Drought Applications

**Feed Mixing Demonstration to Determine Adequate Mixing Time -** Carl Dahlen/  
Tim Schroeder

**Tour C - Organic Research and Education**

*Host - Steve Zwinger*

**Oat Production and Organic Research/ Consumer Insights -**  
Tom Rabaey  
**Oat Variety Development -**  
Mike McMullen



**Oats for Forage -** Steve Zwinger  
**Chef's Perspective of Local and Organic Grain Use -** Dan Barber

**Organic Field Pea Variety Development -**  
Byron Lannoye

**Organic Oat Breeding -** Jennifer Mitchell Fetch  
**Marketing Oats in Local Markets -**  
Noreen Thomas

**Future of Organic Production -**  
Fred Kirschenmann

**Cereal Grains for Local Craft Use -** Rich Horsley

*Appreciation is expressed to the U.S. Organic Grain Collaboration and General Mills for partial funding for this tour.*

**Tour D - Northern Hardy Fruit Review**

*Host - Kathy Wiederholt*

**Native Pollinators -**  
TJ Prochaska  
**Walking Tour of 13 Fruit Crops -** Kathy Wiederholt



Red currants.

**Afternoon Tour Option  
1:00 to 3:30 (attend one)**

**Tour A - Production Systems / Plant Nutrition / New Technology**

*Host - Ezra Aberle*

**Rye Cover Crop for Soybean and Dry Bean -** Mike Ostlie

**Practical Applications for UAVs -** Paulo Flores

**Soybean Weed Management Traits -**  
Greg Endres



**Integrating Cover Crops and Beef -**  
Chanda Engel

**Industrial Hemp -** Roger Gussiaas/Bryan Hanson

**Sensor-based N for Wheat and Corn -**  
Szilvia Yuja

**P Impact on Wheat Varieties -** Jasper Teboh

**Tour B - Soil Health Workshop (Organic Systems) [session in North Meeting Room]**

*Host - Steve Zwinger*

**Soil Health, Nutrition and Taste -** Dan Barber

**Soil Health Insights -** Fred Kirschenmann

**Garden Production Effects on Soil Health -**  
Theresa Podoll

**Using Livestock to Enhance Soil Health -**  
Darrell Oswald

**Influence of Soil Health on Weed Ecology -**  
Greta Gramig

**Use of Cover Crops to Benefit Soil Health -**  
Marisol Berti

**NRCS Support for Soil Health -** Hal Weiser

*Appreciation is expressed to the U.S. Organic Grain Collaboration and General Mills for partial funding for this tour.*

**Tour C - Pulse Crop Tour**

*Host - Suanne Kallis*

**Management of Ascochyta Blight of Chickpeas -** Julie Pasche/Michael Wunsch  
**Disease Management Priorities and Research in Western ND -** Audrey Kalil

**Management of Root Diseases in Peas and Lentils -** Julie Pasche/Michael Wunsch

**Management of Foliar Diseases in Peas -**  
Michael Wunsch

**Weed Management Update -** Brian Jenks  
**Identification and Management of Faba Bean Diseases -** Venkat Chapara

**Insect Management Update -** TJ Prochaska  
**Management of Foliar Diseases in Lentils -**  
Michael Wunsch



Phantom 4 drone view of the CREC livestock unit.



Inside the new seed cleaning facility.



Crop Management Field School.



North Dakota Angus University cattle.

*The noon meal is sponsored by the Carrington Research Extension Center and the Northern Pulse Growers Association.*