

Experiment Station

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

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Area Specialist/Livestock Systems  
Precision Agriculture Spec.  
Environmental Mgmt. Spec.  
Administrative Secretary

Farm Business Management/ND Forest Service

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Instructor (part-time)  
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Advisory Board

Duane Burchill Sr.  
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Justin Olson  
Lowell Berntson  
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Sandy Werth  
Mike Huebner  
Kurt Bollingberg

Barnes County  
Benson County  
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Dickey County  
Eddy County  
Emmons County  
Foster County  
Garrison Diversion Cons. Dist.  
Garrison Diversion Cons. Dist.  
Griggs County  
Kidder County  
LaMoure County  
Logan County  
McIntoch County  
Stutsman County  
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        |
| Fababean      | 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



**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.