NDSU AGRICULTURAL AND BIOSYSTEMS ENGINEERING

ABEN

Digital Agriculture in Today's Classroom

Day 1 - June 13, 2023

Time	Session	LOCATION
8:30 a.m. - 9:30 a.m.	**Welcome** *Dr. Greg Lardy, NDSU VP for Agricultural Affairs; Dean, College of Agriculture, Food Systems, and Natural Resources; Director, ND Agricultural Experiment Station; and Director, NDSU Extension* *Dr. Leon Schumacher, NDSU Department Chair, Ag and Biosystems Engineering* **Intro to Precision Ag – The beginnings: 1991** *- John Nowatzki and Mike Ostlie*	**Ladd 114**
9:30 a.m. - 10:30 a.m.	**GIS basics and its application to precision agriculture** – *Dr. Dave Kramar, International Water Institute*	**Ladd 114**
10:30 am – 10:40 am	**Snack Break**	**Ladd 114**
10:40 a.m. - 11:30 a.m.	Utilizing Today's Digital Ag Tools in a Research Setting – Crop and Livestock – Dr. Rex Sun	**Ladd 114**
11:30 a.m. - 12:30 p.m.	**Working Lunch - Lesson Plan Project**	**Nueta in Student Union**
12:30 p.m. - 1:50 p.m.	**Digital Agriculture Data from a Farmer's Perspective** *- Sarah Lovas, Farmer/Agronomist – CK Technology* *- Carmel Miller, Farmer/Associate Professor of Agriculture, Technology & Natural Resources - Bismarck State College*	**Ladd 114**

Day 1 – June 13, 2023 (continued)

2:10 p.m. – 3:40 p.m.	**Tour RDO** **Product Showcase:** **What is the Latest Software/Hardware in Digital Ag Today?** • John Deere - RDO - *Tony Kramer, RDO* • My Operations Center – *Tony Kramer, RDO* • 2960 34th St S, Moorhead, MN	**LOCATION**
		RDO
4:00 p.m. – 5:00 p.m.	**Profit Strategies for Precision Agriculture** - *Dr. Erik Hanson,* Agribusiness and Applied Economics - Extension	**Ladd 114**

Day 2 – June 14, 2023

7:45 a.m.	**Welcome Back & Review** *Dr. Leon Schumacher*	**LOCATION**
		Ladd 114
8 a.m. - 9:30 a.m.	**Tour at Appareo/IntelligentAg** – *Brenda Wyland* • 1810 NDSU Research Cir N	**Appareo**
10:00 a.m. - 11:30 a.m.	**Tour Titan Machinery Product Showcase:** **What is the Latest Software/Hardware in Digital Ag Today?** • Case IH – *Sam Christianson and Brett Swenhaugen, Titan Machinery* • 3314 70th St S, Glyndon, MN	**Titan Machinery, Moorhead Store**
11:30 a.m.	**Travel to Grand Farm**	
11:30 a.m. - 1 p.m.	**Working Lunch at Grand Farm – Lesson Plan Project**	**Grand Farm**
1:30 p.m. - 3:30 p.m. **Participants will be split up into 3 Groups - 30 minutes at each station**	**Drone flying/image data collection/data review at Grand Farm** **Introduction by Grand Farm staff** 1. *Rob Proulx* - Drone regulations and setup (Include aspects of Part 107 requirements. Demonstration of setup of several drone types, practice taking off and landing). 2. *Paulo Flores* - Monitoring crops using drones (Demonstrate drone mapping mission setup, talk about sensors and their purpose. Demonstrate a flight to collect data, show results from previous flight, and discuss how the information can be used. 3. *Rex Sun* - Drone use in weed management. (Show results of weed mapping. Explain what a prescription map is and how it helps, and demonstrate sprayer drone flight). Robotics in the field - weed identification. Big Weedbot.	
3:30 p.m.	**Wrap up**	