

December 13, 2023

State Board of Agricultural Research and Education,

On behalf of Grand Farm Research and Education Initiative (Grand Farm), we want to express gratitude for the opportunity to present our observations on opportunities and challenges in agriculture within North Dakota and our region. Over the past five years, Grand Farm has worked to develop a network of growers, established organizations, startups, education and academia, investors, and government to collaborate towards solving problems in agriculture. This network includes 67 partners who have collaborated on projects to advance agriculture technology.

This year, Grand Farm published the Grower Pain Point Report, which included interviews with approximately 100 independent growers and ranchers, leaders representing grower councils and associations, and Grand Farm's Grower Advisory Board. The Grower Pain Point Report identified over 50 themes representing opportunities and challenges growers in North Dakota are facing. Important themes include: High adoption cost and unclear return on investment; unfamiliarity with technology; reliability of technology; and, lack of accurate value propositions.

To solve these, Grand Farm is providing capabilities to both research and develop technology, and a process to identify and validate technologies to directly solve grower problem sets.

Grand Farm's Innovation Campus in Casselton, North Dakota provides acreage for startups, researchers, and established organizations to conduct research and development activities required to commercialize their ideas. This provides direct access to crops found in North Dakota, and examples of capabilities including: a weed sandbox for identifying and destroying weeds, and last-mile and last-acre connectivity.

Over the past year, Grand Farm has worked with several organizations on research and technology scouting – identifying both technology and research being developed globally to solve challenges in agriculture. One example of this was working with the Beet Sugar Development Foundation on identifying and reaching out to companies working on solutions to address herbicide-resistant weeds outside of traditional chemical applications – solutions included robotics, RNAi, and identification-and-spray technologies. In 2024 we look forward to validating the effectiveness of these technologies on North Dakota crops. This work has also served as an attractor of organizations to apply their technology specifically to our geography, also resulting in several of these organizations relocating or opening additional locations in our region.

With the rapidly changing landscape of agriculture technology solutions, we have been working on education programs to keep k-20, educators, researchers, and growers knowledgeable in their field. In 2024 Grand Farm will be hosting a regular set of educational events and workshops, and field days to expose our ecosystem to these technologies and subject matter experts who can keep them informed.

We look forward to continuing this work into the future to stay on top of the ever-changing landscape of grower opportunities and challenges, and emerging technology innovations.



Dr. William Aderholdt
Director, Grand Farm