Foundation for Food and Agriculture Research Public Session Comments
Jay Akridge, Glenn W. Sample Dean, Purdue University College of Agriculture
October 28, 2015

First, a word of congratulations to Director Rockey and the Foundation for Food and Agriculture Research Board and staff on the launch of this most exciting development in agricultural research. FFAR's charge to 'catalyze innovation to solve pressing food and agriculture challenges that affect the lives of all Americans' is badly needed at a time when investment in agricultural research is lagging and productivity levels are not keeping pace with that needed to provide adequate nutrition for the 9+ billion people that will inhabit our world in 2050 (2015 GAP Report, Global Harvest Initiative).

As FFAR prioritizes investments in the seven priority areas, our College hopes that you will look at 'platform' investments that promise to open up entirely new areas of science/new approaches to the grand challenges we face. These platform investments can bring together industry, academe, and government around key questions that must be answered, technological barriers to research progress, or issues that cut across disciplines but which don't fit current funding models. Areas where there is potential to launch new approaches or relax critical constraints to progress would seem to be of highest priority. Your role to catalyze such high impact science by levering investments others are making forces you to look further into the future with respect to impact – will the projects you fund lead to immediate public impact, or will they serve as platforms for a wave of highly innovative science made possible by your investment?

For example, Purdue University has made a $20m+ commitment to a Plant Science Research and Education Pipeline – a targeted series of investments in faculty, staff, facilities, and equipment to dramatically enhance our capacity for plant improvement research. One element of this Pipeline is the area of field-scale plant phenomics – the collection and analysis of information on growing plants. The challenges here are many – determination of traits that are important for plant improvement, development of sensors and techniques for automated measurement of important traits, and the data analytics demanded by terabytes of data, to name just a few. These issues, of fundamental importance to industry, government, and academe, demand a multi-disciplinary approach that includes plant scientists, engineers, computer scientists, and others. Output from this work offers the potential to shape how we approach the broad area of plant phenomics and becomes in essence a platform for future work in this area. This investment may truly catalyze approaches, techniques, and technologies that can be adapted by scientists working across the globe.

We believe the role of FFAR is critical to making progress in areas such as plant phenomics. You have the opportunity to engage researchers from industry, from government, and from academe in a dialogue about the key constraints to progress in your seven priority areas. You have the opportunity to leverage your funding to bring partners to the table to address these key constraints and opportunities. Ultimately, you have the opportunity to help build research platforms that will launch the path-breaking science we need to address the production, nutrition, and environmental challenges of a growing world. Our College looks forward to working with you as you carry out this exciting and important mission.