have just had the opportunity to represent ASA at the 2015 AAAS Annual Meeting. The theme for this year’s meeting was Innovations, Information, and Imaging. The theme couldn’t have been more relevant for the sciences that ASA members participate in as they strive to sustainably improve the human condition for a growing global population in a changing environment! Last year, I shared information about this theme and the call for symposia with the ASA section leaders. Dr. V. Gopal Kakani, associate professor at Oklahoma State University and the 2014 presiding leader of our Bioenergy Systems Community, developed the successful symposium proposal, “Innovations, Information, and Imaging for Next Gen Agriculture.” The abstract of this symposium highlights the many challenges facing agriculture in the coming decades and the rapidly changing but powerful technologies that can help agronomic scientists and practitioners address the challenges:

“Next Gen Agriculture has to produce more, consume and pollute less, and fulfill consumer preferences under the increasingly uncertain effects of climate change and resource availability. Need for agricultural decision making at all levels is increasing rapidly due to increased demands for agricultural products and increased pressure on land, water, and other natural resources. These challenges can be met through Next Gen Agriculture that includes Innovation, Information, and Imaging. Information is generated on a continuous basis in laboratories, research plots, and classrooms around the world. Innovative techniques used include high-throughput sequencing, high-throughput phenotyping, high-frequency weather data, and remote sensing. These advances in technology are generating information in petabytes, but the innovation in improving crop yield is lagging behind. Tools such as simulation models, precision agriculture, and GIS can integrate genotype, phenotype, environment, and management for innovation in crop productivity and yield. Analysis of these multifaceted datasets requires trained researchers, extension personnel, and students that can link datasets and tools and generate useful products.”

I had the privilege of joining Dr. Jerry Hatfield, USDA-ARS National Lab for Agriculture and the Environment, who spoke on “Innovations in Information Management to Enhance Agriculture: A Research Perspective” and Dr. Cynthia Rosenzweig, NASA Goddard Institute for Space Studies and The Earth Institute at Columbia University, who spoke on “AgMIP Global and Regional Assessments: Methods and Results” in sharing perspectives on the role of professional societies in fostering Next Gen agriculture. Dr. Vara Prasad, Kansas State University, facilitated a lively discussion.

Fostering Next Gen Skills

Professional societies have many roles in fostering Next Gen skills and communities of interest in order to advance toward the UN Millennium Development Goal to eradicate extreme poverty and hunger for a growing population. Professional scientific societies play a unique role in engaging the next generation of agricultural researchers and educators by helping shape the image of agricultural sciences and agricultural careers as exciting, challenging, and rewarding in order to attract the best and brightest students to scientific disciplines that are essential to innovative agricultural systems. Professional societies foster the next generation through student programs and mentoring early career professionals. Networking through professional societies provides lifelong collaborative opportunities to address increasingly complex agricultural systems. Societies provide forums for the scientific community to identify and advance the science and technologies as agricultural management grows more and more on the ability to obtain and utilize diverse information sources in scientifically sound and risk-based decision making in agriculture. With rapidly advancing and complex technologies, lifelong learning through conferences, education programs, and publications are critical resources. Professional societies also provide mechanisms to facilitate essential cross-disciplinary and cross-sector dialog. Finally, societies play a key role in the agricultural sciences by providing peer-review systems, standards, certification programs, and publications that are essential to support innovation for Next Gen agriculture.

As a member of ASA, you contribute to these critical and productive efforts. I look forward to working with you as we move through the coming year and welcome your ideas and efforts to advance our many programs.