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The Honorable Sonny Perdue
Secretary, U.S. Department of Agriculture
1400 Independence Avenue, SW
Washington D.C. 20250

Dear Secretary Perdue,

On behalf of the Irrigation Association and our members who are on the front lines of innovating the water use technologies of today and tomorrow, thank you for your leadership in developing the USDA's Agricultural Innovation Agenda. The U.S. agricultural industry sits at the nexus of conservation and productivity. Through the current renaissance of irrigation technology development in the United States, our nation's (and global) farmers are growing more yield than ever before, while using less water, energy and other natural resources.

Innovations in irrigation technologies do not stop at how water is applied to the crop. While pressurized irrigation continues to efficiently apply water to the crops, there are more and more technologies available to farmers that effectively and efficiently manage water and agricultural irrigation systems and machines.

According to the 2018 USDA Irrigation and Water Management Survey, irrigation is only used on approximately 25% of agricultural land in the United States. In fact, out of all of the agricultural land in production in the United States, only 17% use some form of pressurized irrigation.

Irrigation, while necessary in many parts of the United States, is becoming more and more used in historic non-irrigated areas for a variety of reasons to improve crop management (drought mitigation, increasing productivity, nutrient application, etc.) Through irrigation, many farmers who would have received disaster relief assistance or crop insurance due to drought, would actually have a productive crop year. This was evident during the drought of 2012 that affected many parts of the central United States.

To keep U.S. farmers and ranchers globally competitive, while ensuring Americans have a safe and reliable food supply, policies need to reflect the importance of both productivity and conservation. Through efficient irrigation technologies that will be highlighted later, farmers have the ability to save time and labor, while increasing yield. These may be accomplished through using the same amount of water. However, under policy, they would not be eligible for EQIP assistance because water conservation was not realized. **This needs to change to ensure our nation's food supply is safe and reliable.**

As I mentioned earlier, our industry is at a renaissance of technology development and innovation. It is an exciting time to be part of agriculture and, specifically, irrigation.

Research

While much is already known and understood, more needs to be done to drive irrigation technology to its full potential. Manufacturers, input providers, extension, and producers need to be more aligned and informed of what each is up to, in order to drive the learning and opportunity curve in a steeper trajectory upward. On farm research with existing systems will provide production scale decision making and advancement of many of the goals outlined in AIA.

The Irrigation Association is a strong advocate of research and would like to see the NRCS, ARS, NIFA and others work more closely together and with industry to 1) identify research needs, 2) cost-effectively conduct research, and 3) translate that research directly for farmers on how to improve productivity and conservation through efficient water use. The Irrigation Association is already leading this effort through joining with industry leaders, land-grant universities, and the Foundation for Food and Agriculture Research in creating the Irrigation Innovation Consortium (www.irrigationinnovation.org). There is great potential for the USDA to partner with industry in research development through this initiative.

Programs, Metrics and Availability

EQIP is a valued program that enables the adoption of efficient irrigation practices and technologies. However, more leeway needs to be provided to irrigation technologies, specifically, to assist growers in not only conserving water, but also effectively managing their crop yield and increase water quality in their watersheds. For example, through both subsurface drip irrigation (SDI) and overhead sprinkler irrigation (pivot, lateral move, etc.), chemicals that increase crop health can be efficiently applied, significantly reducing runoff or leaching. Programs like EQIP should view efficient irrigation as primarily a crop management tool, rather than a tool to conserve water only.

In addition, there are ample opportunities in the Livestock Title, in addition to the Conservation Title, of the farm bill's programs to embrace irrigation technologies for effluent management. Never before have irrigation technologies been as necessary as they are today to both increase productivity, while increasing environmental health.

**Technologies**

Subsurface Drip Irrigation

According to the 2018 USDA Irrigation and Water Management Survey, there are 5.8 million acres irrigated by drip irrigation in the United States. Accounting for approximately 2.5% of all agricultural land in the United States. Over the past few years, innovations have been made in increasing the use of SDI in effluent management, fertilizer utilization and on various row crops.

Variable Rate Irrigation

VRI, used primarily in mechanized irrigation, provides farmers with the ultimate control on managing the amount of water applied to a crop, no matter where the pivot it in its cycle. In fact, this can be managed via remote control technology from anywhere in the world. Currently, mechanized irrigation is used on 31.6 million acres of land in the United States. A small percentage of the overall cultivated land.

Irrigation Scheduling

Efficient irrigation technologies are only has good as they are managed. Irrigation scheduling is a key component to ensuring technologies are both conserving water, while enhancing productivity. Effective scheduling only uses the water needed to grow the crop, based on factors such as soil moisture data and growth stage of the crop.

Remote Monitoring and Control with Weather Stations

This may seem simple, but providing farmers with the data to start and stop irrigating based on weather data (like when it's raining) is not widely used throughout the United States. Significant amounts of water can be saved employing this type of technology.

Access to Broadband Technology

While the last farm bill increased monies available to invest in access to rural broadband, much work needs to be done to adequately ensure farmers (and rural schools, hospitals, etc.) have access to reliable broadband service to effectively manage their agricultural operations, including irrigation. While irrigation technology is embracing telemetry, weather data, remote controls, satellites, drones, etc., access to broadband is no longer an option, it is a necessity. USDA programs need to recognize this and work in tandem with irrigation districts, conservation districts and other utilities to ensure farmers have the technologies they need, while the communities have the infrastructure to support these technologies.

Finally, there are many barriers to adoption in the United States. Of course, access to capital continues to be a hurdle, but more so than not, education is the largest barrier. From the farmers, to extension officials, to the dealers, to USDA employees, irrigation technology is being developed at such a rapid pace, the knowledge gap is growing faster than ever. The Irrigation Association is committed to partnering with the USDA in not only promoting all of the technologies mentioned above, but also identifying ways to increase educational opportunities, regarding efficient irrigation technologies and practices, throughout agriculture.

Thank you, again, for your leadership in promoting innovation in American agriculture. If you have any questions or would like any additional information, please contact me at johnfarner@irrigation.org or 703.536.7080.

Sincerely,

John Farner
Industry Development Director