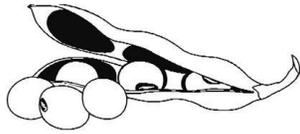


IOWA STATE UNIVERSITY

Iowa Soybean Research Center



April 2019 Newsletter

Vol. 1

Visit our website at www.iowasoybeancenter.org

Welcome to the first edition of the Iowa Soybean Research Center newsletter! The newsletter will be a place where we share updates regarding the collaborations and research with our many partners including researchers at Iowa State University and the Iowa Soybean Association, industry leaders, and the farming community. If there is something you would like to see in an upcoming newsletter, please let us know!

From the Director

By Greg Tylka

“If you want to go fast, go alone. If you want to go far, go together.” This African proverb describes the founding principle of the Iowa Soybean Research Center (ISRC) at Iowa State University - working together.



For decades, Iowa has been home to universities, organizations, companies, and individuals who conducted soybean research to learn how to best produce soybeans and who delivered research-based information to Iowa's soybean farmers through extension and education programs and activities. In 2014, leaders from Iowa State and the Iowa Soybean Association (ISA) joined forces and formed the ISRC to work together with industry to increase support and coordination of soybean research and educational activities at Iowa State. Working together, the ISRC seeks advice and guidance from farmers and industry to identify research needs. The center combines and leverages financial resources from multiple sources together to fund soybean research and educational activities at Iowa State. And we work together to convey the results of our research to the people we work to serve – Iowa's soybean farmers.

Thanks to very generous support from Dr. Keith and Virginia Smith, we bring you this inaugural issue of the ISRC newsletter. We want to keep you informed of the soybean research, teaching, extension activities and going on at Iowa State.

George Washington Carver is quoted to have said, “When you can do the common things of life in an uncommon way, you will command the attention of the world.” By working together, the ISRC is doing great things for Iowa's soybean farmers. And we hope you notice!

A Brief History of the Iowa Soybean Research Center

The Iowa State University Iowa Soybean Research Center (ISRC) was formed July 1, 2014 following approval by the Iowa Board of Regents. The center is a partnership between the Iowa Soybean Association (ISA) and Iowa State University.

The purpose of the ISRC is to increase collaboration, coordination and integration among Iowa State, ISA, industry and farmers to align soybean-related activities at Iowa State with the needs of Iowa soybean farmers and the industry that supports production of the crop. The center involves and helps coordinate research, teaching, and extension activities of faculty and staff who work in the areas of soybean biology, breeding, economics, precision agriculture, production, and pest management at Iowa State and ISA.

Specific research areas for the center are identified by the center's Industry Advisory Council. The center is a formal collaboration among the industry partners, the Iowa Soybean Association, Iowa State's College of Agriculture and Life Sciences. Together, they make up the Industry Advisory Council for the center.

Funding for the center comes from Iowa State, ISA, industry partners and donations. Any private or public entity may become a partner of the center. Our goal is to seek widespread input from individuals representing key segments of the soybean production and protection system. Partners from select non-governmental organizations with expertise on policy, social, and environmental issues also are desired. The ISRC currently has three industry partners: BASF, Bayer and Cornelius Seed.

Staff of the ISRC include Director and professor of plant pathology and microbiology Greg Tylka, Extension and On-Farm Research Coordinator Clarke McGrath, Program Coordinator Jill Cornelis and Communications Coordinator Kara Berg. Many ISU faculty are affiliated with the center: www.iowasoybeancenter.org/affiliates.



ISRC Welcomes New Industry Partner BASF



BASF has joined the Iowa Soybean Research Center at Iowa State University as an industry partner to support emerging technology and innovations to help soybean growers produce high yielding, high quality soybeans.

"We welcome and look forward to collaborating with BASF," said Greg Tylka, director of the Iowa Soybean Research Center and a professor of plant pathology and microbiology at Iowa State. "We greatly appreciate BASF's financial support. Their partnership with the center underscores their commitment to research in the area of soybean production and illustrates their understanding of the real-world challenges that Iowa soybean farmers face."

Julia Daum, BASF senior program lead for trait research, will represent the company on the center's Industry Advisory Council, which provides input on research priorities.

"BASF is committed to supporting the industry, and we believe it is important to partner with organizations like the Iowa Soybean Research Center," said Daum. "We are excited about the research center's new opportunities and innovations for soybean growers that will provide long-term benefits for their operations."

"We welcome BASF's commitment as an industry partner and see it as an important step in how the center facilitates public-private collaborations to better meet the research and production-information needs of Iowa soybean farmers," said Ed Anderson, senior director of research for the Iowa Soybean Association and chair of the Iowa Soybean Research Center's industry advisory council.

For more information on becoming an industry partner of the Iowa Soybean Research Center contact us at 515-294-0878 or ISRC@iowasoybeancenter.org. More at <http://www.iowasoybeancenter.org/>.

ISA and ISRC Leadership Meet With CALS Dean Robison



Pictured left to right are Kirk Leeds, Iowa Soybean Association (ISA) CEO; Dan Robison, new endowed dean of the College of Agriculture and Life Sciences; Ed Anderson, ISA senior director of research and Greg Tylka, director of the Iowa Soybean Research Center (ISRC) recently met to discuss the importance of the collaborative efforts of the ISRC, ISA, and Iowa State.

Arti Singh's App Selected as Exhibit for ISU Day



Iowa State's Arti Singh showcases her soybean smart phone app at Cardinal and Gold Day at the Iowa State Capitol.

Iowa State agronomy adjunct assistant professor Arti Singh was selected to participate in this year's Cardinal and Gold (ISU) Day at the state capitol on March 6, 2019, as one of the interactive exhibits demonstrating entrepreneurial and innovative efforts across the university. Singh's was one of four research projects chosen from the College of Agriculture and Life Sciences and one of 24 projects from Iowa State to be highlighted.

Singh developed a smart phone app called SoyMD to help farmers identify stresses in soybean fields. The app allows farmers to identify diseases in real time using photos. The app was funded in part by the ISRC.

ISRC Funds Research Projects

Each year, the ISRC funds soybean-related research projects following input on research priorities from soybean farmers and from the ISRC Industry Advisory Council. The council is made up of representatives from the ISA and from our industry partners: BASF, Bayer and Cornelius Seed. Following are highlights of two projects funded by the center in 2015-2016.

Understanding Interactions Between Soybean Planting Date and Maturity Across Environments

Sotirios Archontoulis, assistant professor of integrated cropping systems; Mark Licht, extension cropping systems agronomist with responsibilities in corn and soybean management/production; and Ranae Dietzel, a postdoctoral research associate at the integrated cropping system laboratory, all of Iowa State, created the Soybean Planting Decision Tool.

Choosing soybean maturities and when to plant soybeans are two critical decisions that farmers make each year. The goal of the project was to improve soybean yields in Iowa using science-based simulation models.



Map of the Soybean Planting Decision Tool coverage shown above. The tool has the potential to be used in extension, teaching and research and covers 11 geographic locations.

The support tool helps farmers better understand planting date by maturity, by location, interactions on soybean yield and crop staging. Users can select a soybean maturity (12 options) and a planting date (24 options) and visualize graphically the impact of those

decisions on yield and crop staging, as well as learn the optimum date of planting and maturity group selection for maximum yields.

This work was part of the project, "Cropping Systems Modeling Tools to Improve Soybean Management and Yields in Iowa," funded by the ISA and the ISRC. The Soybean Planting Decision Support Tool can be found at

<http://agron.iastate.edu/CroppingSystemsTools/soybean-decisions.html>

Integrated Research and Education Program for Use of Remote Sensing and UAVs for Enhanced Soybean Production

Matt Darr, associate professor in agricultural and biosystems engineering, Iowa State ; Randall Pearson, professor in geography, Southern Illinois University Edwardsville; and project collaborator Peter Kyveryga, director of analytics, Iowa Soybean Association, launched an integrated research and educational program focused on uses of remote sensing imagery in agriculture. The program established two dedicated soybean remote sensing research and development sites for the continuous development of remote sensing tools and educational aides for Iowa soybean farmers.

Commercial imagery from unmanned aerial vehicles (UAVs), manned flights, and satellites were collected throughout the growing season to quantify issues with image capture. The research focused on:

- the influence of timing of imagery collection on the ability to detect soybean stress and management problems
- the repeatability and calibration requirements of commercial imagery sources for using imagery comparisons over time
- the spatial accuracy of commercial aerial imagery sources and development of recommendations for the use of the imagery in site-specific management

The research further incorporated a grower-focused education initiative to promote best management practices for using aerial imagery sources for in-season soybean decisions. This educational program focused on web content and concise videos to share key decision support tools related to when and how to best use imagery in soybean production. For more information, visit:

<http://www.iowasoybeancenter.org/info/DarrRemoteSensingProposal.pdf>

ISRC hosts Iowa Soybean Association Appreciation Reception

In December 2018, the Iowa Soybean Research Center co-organized an appreciation reception for the Iowa Soybean Association at the new Iowa State Advanced Teaching and Research Building (ATRB). Iowa State President Wendy Wintersteen and ISA Board President Lindsay Greiner spoke at the event and the new endowed dean of the College of Agriculture and Life Sciences Dan Robison attended and took part in facility tours.



Pictured left to right are President Wendy Wintersteen, ISRC donors Dr. Keith and Ginny Smith, interim dean of the College of Agriculture and Life Sciences Joe Colletti, ISRC Director Greg Tylka, ISA Chief Operating Officer Karey Claghorn, and endowed dean of the College of Agriculture and Life Sciences Dan Robison.

Upcoming Events

- June 26 - Iowa Soybean Research Center Staff Retreat
- July 15 - Visit by Iowa Soybean Association's ISA Experience (engaging leadership) class

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Have an idea for an upcoming newsletter? Contact Kara Berg at kjberg@iastate.edu.

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