Checking in With CenUSA

Sustainable Production and Distribution of Bioenergy for the Central US

CenUSA Bioenergy is a multidisciplinary project funded by the U.S. Department of Agriculture-National Institute of Food and Agriculture (USDA-NIFA). The goal of the project is to research the production and use of perennial grasses on marginal lands for use as alternative biofuels and bioproducts. Learn more about CenUSA at www.cenusa.iastate.edu.

Jerry Kaiser spoke in July 2019 about his work and involvement with CenUSA Advisory Board with CenUSA Communications Intern Tyler Worsham.[1] Kaiser detailed his background in plant selection and how he used that specialty to advise the project's development of effective demonstration plots. Learn more about Jerry Kaiser at https://www.linkedin.com/in/jerry-kaiser-1b752975/.

How and why did you get involved CenUSA?

"I guess it all got started when I was recommended by Ken Vogel (Former CenUSA Co-Project Director, Ret.) from ARS (Agriculture Research Service) to be on the advisory board. I was the USDA Plant Materials Specialist for Iowa, Illinois and Missouri. Those were the three states that I served."

Could you give a brief description of your professional background?

"My personal background is in plant selection. I've been an agronomist and a USDA field conservationist with the Natural Resources Conservation Service (NRCS) for 38 years, and I was the Plant Materials Specialist at Elsberry Plant Materials Center (PMC) with the USDA NRCS for 22 years. The plant materials center at Elsberry serves three states: Iowa, Illinois and Missouri. I was developing native plant materials, testing and releasing these new products with seed and plant producers to market these new plant releases for our service area. That was my main responsibility."

Jerry Kaiser, CenUSA Advisory Board

Have you advised for any other research projects?

"We had ongoing research projects at Elsberry PMC. We released new plants and developed planting guides and technical notes for our NRCS field offices. They are located in each county within our three-state service area. This information directly benefits land owners with whom

[1] All of the words and ideas expressed in this interview fairly and accurately represent the speaker. Some quotes may be paraphrased for brevity and clarity. The opinions expressed in herein do not necessarily reflect those of Iowa State University, USDA-NIFA, Purdue University, Ohio State University, USDA-ARS, the University of Minnesota, the University of Nebraska, Lincoln, the University of Vermont, or the University of Wisconsin.

our field offices are working, so with our new releases, we would do the studies for those and actually do the field testing for in-field performance of the release."

How did your background and advisory experience inform your approach with the CenUSA advisory board?

"It was important to be able to apply the research being conducted by CenUSA, and we wanted to test and implement that on a field scale so it would be practical for land owners to accomplish. We really wanted more demonstrations in the field based on the research that was done."

In what ways did the project challenge and broaden your knowledge and skill set?

"The challenge was that so many different research areas were being explored by the teams. To accomplish this, there were various universities throughout the Midwest that were working on these projects. It was enlightening to know all of this information, but sometimes the amount of data being generated was overbearing at times.

The organization was great. They brought the teams together for various annual meetings, and we had the opportunity to interact with the researchers on their projects. They gave reports, and we were able to provide feedback, but how we connected and interacted was the most important part of accomplishing the goal of the project. That was difficult at times with the amount of research involved."

What specific project objectives do you believe directly benefited from your experience?

"With my background as a plant material specialist, I worked with native grasses, targeting major land resource areas for specific plant species and working on highly erodible land areas. We wanted to select the right plant species that would work on those sites, and we would also want the correct management techniques to be used such as weed control and seeding methods. We suggested training ideas like drill calibration and harvesting techniques so that the land owners would have a better opportunity to implement, establish and manage those native grasses that were going to be used for bioenergy. Things like timing of harvesting was important so that nutrients would cycle down and so the biomass could df be harvested without having all of the nutrients in the plant material. These techniques were the way they benefited from my knowledge and experience over the past 22 years as a plant materials specialist."

Read our White Paper
https://cenusa.iastate.edu/files/cenusa_2019_075.pdf

How was the advisory board as a whole able to influence the direction of the project?

"When we started out with our first meeting, each advisory board member was given the opportunity to provide feedback. First, the advisory board comments were given at the end of the annual meetings, and we had to accumulate all of this research that we thought was important. We gave reports, and they made that a part of the study documentation. The study team could summarize our concerns for the project, but as we moved on, we found it was more beneficial to give our feedback immediately after the researchers gave their documentation. We could give our feedback and be part of a discussion that clarified our concerns with the research groups. This was all being documented so that they could go back later and review our comments as an advisory committee."

What do you think is the most important contribution made by the advisory board?

"Well, the advisory board was made up of industries, agencies, landowners and individuals with special backgrounds that could promote the advancement of bioenergy. The main focus of the guidance and recommendations that the advisory board offered was ensuring a practical, economical product that can be implemented and produced by the rural community. We were always emphasizing that it has to be practical and able to be implemented.

The land owners and operators would produce it, whatever the bioenergy crop, so long as they can make money with it and have it as a marketable and sustainable product in the long-term. That was the most important contribution that we were hoping to emphasize with all of the research that was going on with the broad diversity of the advisory members that represented the board. That was the important thing that we could share to make this move forward."

What do you hope will come of CenUSA?

"My hope was that bioenergy crops would be an industry that would develop from this (CenUSA Bioenergy), that it would be widely accepted and used to protect our natural resources. My hope is that we would use targeted natural grasses and plant material on areas that are sensitive in the environment such as erodible land. It has to be sustainable and profitable for the land owners. That was the ultimate goal for any bioenergy crop. It's has to be usable, functional and marketable."

How do you think others will take the CenUSA project and apply it to future research?

"I'm hoping that all of the data that has been developed and the research that has been done through this project have a future so that this won't have to be done again. The research studies, papers and all the documentation are usable and able to be implemented. Hopefully, it will be practical and marketable.

It seems like we have outside factors that we couldn't control like the price of other fuels such as oil. When the price of oil goes down, bioenergy becomes less profitable. As our fossil fuels are depleted, we have to have other alternatives, but they have to be able to compete in the marketplace and have the opportunity to be available for the consumer to use them. That's what I hope that CenUSA has done, that this great research pushed us forward to a future in which this can be utilized when we need it."

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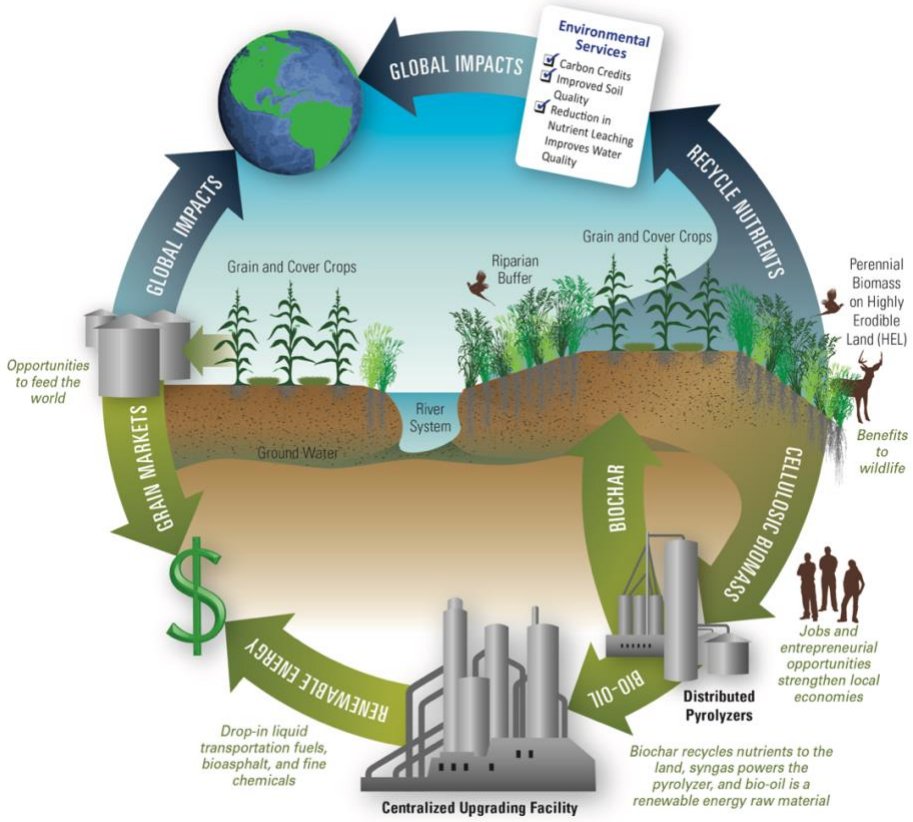

CenUSA Bioenergy Vision

Learn more about CenUSA at www.cenusa.iastate.edu

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