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 Initiative Competitive Grant No. 2011-68005-30411). CenUSA's goal is to research the production and use of perennial grasses on marginal lands for use as alternative biofuels and bioproducts. More information is available at www.cenusa.iastate.edu.

Jay Van Roekel[1], Corporate Accounts Manager for Biomass, Recycling and Forestry at Vermeer Corps. and a CenUSA advisory board member, spoke with CenUSA Communications Intern Tyler Worsham in June 2019 about his experience with the project in which he advised the researchers in understanding harvesting logistics best practices.[2]

"Renewable energy needs to be competitive with what's out there today. Your extra bonuses for the environment should be the gravy." *Jay Van Roekel*

Why and how did you come to join the CenUSA advisory board?

"Through previous relationships that we had with Iowa State University: Stuart Birrell, Jill Euken and others with whom we worked on other projects. Vermeer and Iowa State are only about an hour apart, so we have a lot of alumni working here. There was a relationship between Vermeer and Iowa State, and with my work in biomass, it was a nice fit, so I was called and asked to serve on the board."

Could you go into further detail about your professional background?

"I've been with Vermeer for 32 years. I started my career in our agriculture division, or 'forage group' as we call it here, baling hay, working with dealers around the globe baling all sorts of crops. As biomass began to generate some interest, I started to focus more on what our opportunities were in biomass, ag-residues and energy feedstocks we could harvest. Then I was asked to lead our biomass relationships here at Vermeer, so I was not only on the harvest side of things, but also representing our grinders which can grind

[1] Lean more about Jay Van Roekel at https://www.linkedin.com/in/jay-van-roekel-34916622/.

[2] 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.

up bales or wood. We have a natural fit with the biomass supply chain here at Vermeer. I was asked to lead those relationships, and I continue to do that to this day."

Have you advised for other research projects, and if so, what did you do?

"Any customer considering a biomass project needs someone to advise them on the best way to collect and pre-process biomass material – so this role has a consulting flair to it. I was a member of an advisory board for the Biomass Thermal Energy Council. It was an association group. That's the only other board on which I have served. I also lead Vermeer's participation in a DOE grant to improve biomass supply chain which involved both harvesting and pre-processing biomass."

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How did your background and previous advisory experience inform your actions on the CenUSA advisory board?

"I think it offered real-world, practical experience. When you are working with a farmer baling switchgrass, corn stalks or forage, you understand that quality and profit are important. I think that the practical experience of working with our customers can help advise a research group like CenUSA or a university research project. What our customers have to deal with is more based in reality in order for them to be profitable and able to run their business."

How did the project challenge and broaden your professional knowledge and skill set?

"I really didn't know much about developing hybrids or varieties from (CenUSA) Objective 1, Feedstock Development. It was interesting to learn about those things, how they cross-bred different plants and picked the strongest survivors out of a test plot. How do you take on the challenge of moving a crop to a different climate? What impacts moisture, whether it's drought, too much rain, insects or soil types?

It was also fun for me to learn how they were going to educate farmers and the public, that being a part of Objectives 8 and 9, Education and Extension & Outreach. That is a really important part. I can see part of the resistance of someone maybe not wanting to set aside some ground to grow switchgrass for seven-to-eight years. How do you educate them to know that this could be a smart move that will be good for their income stream, soil and the environment? Education is so important, especially in schools with younger generations to get them to be more comfortable with it now instead of trying to convert someone who already has their own opinions and methods."

What was the most important input that you were personally able to provide to the leadership team?

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"Well, my roles here at Vermeer are in the feedstock logistics group which lined up with Objective 3, harvest storage and transport pre-processing. That's what we do here, and that's what I'm experienced at. I was able to challenge them to look at some different ideas or wonder why they're going down a particular path in the area of feedstock logistics."

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

"I think it was a pretty interesting group. I knew a few of them before and got to know a few a bit more. I think they're all based in a for-profit industry. We had a couple farmer-land owners in there, some ADM conversion-type people, some equipment manufacturers like me. We were able to think about what the team was proposing or what their ideas were, and we were able to give a little feedback. 'Does that make sense?' 'Will it work?' 'Can it work?'"

If you could distill it down to one thing, what was the single most important contribution that the board made to the overall project?

"I think we challenged them to deliver practical, real-world solutions and attainable results. I think that was important."

I think that the practical experience of working with our customers can help advise a research group like CenUSA or a university research project.

What do you hope will come out of CenUSA?

"We need a successful model. Having been involved with different projects, it seems to me that they start with great excitement, only to stall out or take 10-to-12 years to develop. We need some successful examples or models off of which we can build, and I hope that CenUSA will lead to a practical solution that can stand alone with current energy sources, as well as add all of the benefits to the environment. Renewable energy needs to be competitive with what's out there today. Your extra bonuses for the environment should be the gravy. We've got to stand alone and stand up to current models, and I hope and believe that CenUSA was on the right path."

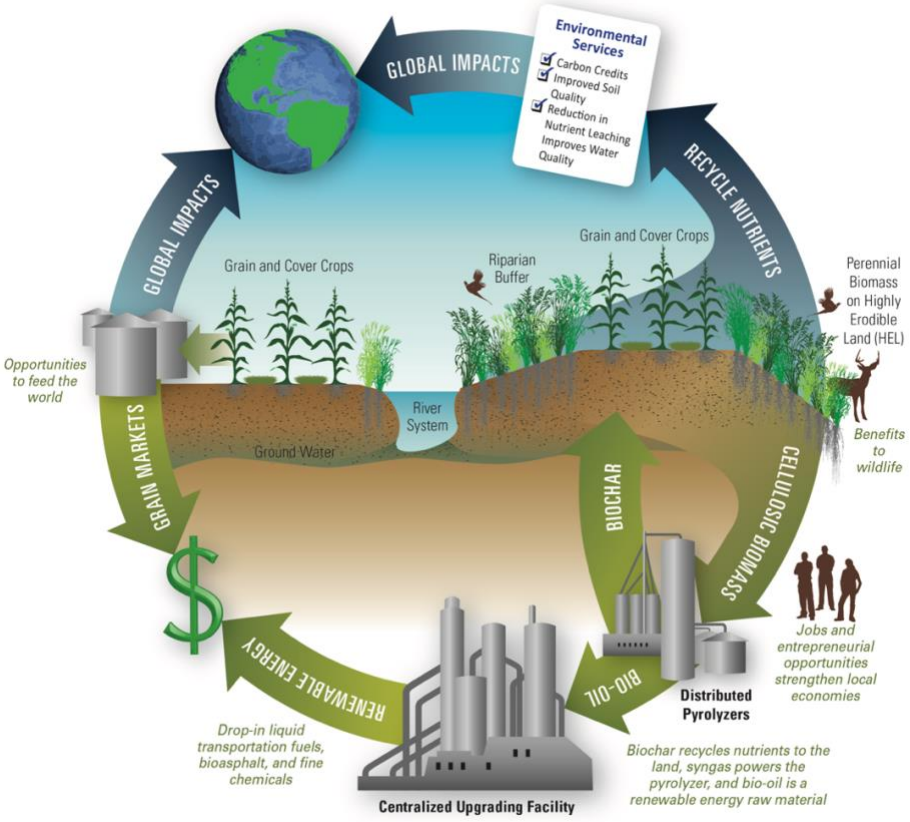
What do you think it would take to actually achieve that?

"It would take some commercial projects that utilize switchgrass or energy crops. That seems to be the main focus. I think that the challenge is going to be to your traditional commodities that are grown on those acres. How do you fit in a standing crop during corn harvest? It's not like a grass waterway you can drive across. How can you use the highly erodible acres where it wouldn't make sense to grow corn or soybeans? Let's convert those to switchgrass and use your best acres to grow the commodity crops. Then provide some local energy with our tough acres. In the USA, we tend to look at large commercial sized projects, perhaps smaller local projects first, then grow in scale after success."

How might you take your CenUSA experience and apply it to the future?

"It was probably one of the neatest things that I witnessed. I can't remember the number of universities that worked together between Iowa State, Nebraska, Minnesota, Purdue, Wisconsin and so on. Seeing members from each of those big universities and people from different industries, all being experts in their

own way, came together, shared experiences and ideas and stayed excited and on task to try new things. Having seen that synergy that the team had, I think that we need to do a better job in our local communities and businesses to listen to one another and stay open-minded with a long-term goal to work towards. It was great. It was just cool to see all of those different players come together to have good, open and frank discussions and challenging ideas without taking it personally. These are all good things that we need to learn how to do in our own personal lives and in business."



CenUSA Bioenergy Vision

Learn more about CenUSA at wwwusa.iastate.edu

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