

SPECIAL ISSUE • November/December 2011

# RESOURCE

engineering and technology for a sustainable world

# EXPLORE

where careers in  
agricultural technology  
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can lead

# A Steel-Toed Work Ethic Gets Your Boot in the Door



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Growing up on a farm, I was always fixing machinery and finding ways to improve it and prevent breakdowns. My parents saw me constantly repairing the farm equipment, and they joked that engineering had to be in my future. This tinkering, combined with a love for math in high school, got me interested in ag engineering tech. The more I researched the field, the more it looked like a go.

Why the University of Wisconsin at River Falls? My parents suggested the school, my grandparents brought it up often enough, and my high school agricultural education teacher praised it—so I checked it out! With a campus visit, I discovered that I loved the “small school” atmosphere, and after touring the engineering department, I knew that UWRF was where I wanted to go. The first week of class confirmed it: UWRF had exactly what I came to learn and accomplish.

Here’s some free advice from a recent grad: **pull on your steel-toed boots and work hard from the first day of class to the last. Set the pace and work hard.** Believe it or not, every class will become relevant at some point. When you begin as an undergrad, you have no idea what job you will end up in. I landed a job doing something I never dreamed of, and I’m thankful I paid attention in every class. And **get involved!** It’s a great way to meet people and accomplish your goals. I ended up taking the lead on a large, automated soybean press project. I learned a lot and accomplished some eye-opening things.



*“I’m proud of the Cargill Kitchen Solutions headquarters in Monticello, Minn., where I spend time planning projects when I’m not working in one of the six plants.”*

## Daniel Pusch

**Age:** 23

**Hometown:** Hartford, South Dakota

**Hobbies/interests:** Racing, cars, farming, agriculture

**Alma mater:** University of Wisconsin-River Falls

**Degree:** Agricultural Engineering Technology BS (2010)

Not getting an internship is the biggest regret I have about my college years. It would have helped me in so many ways—to meet people, show off my work ethic, and get my foot in the door to a full-time job after graduation. Instead, I decided that I would rather go home and work on the family farm during the summers. I’m not sorry, because on a farm you learn something new every day, but an internship might have been more useful for pursuing a career.

Thankfully, I was very involved in the ag department, in clubs, and in intramural sports. I studied and worked very hard. I would have been happy to stay

longer after graduation and take a few more classes to broaden my knowledge!

I loved the UWRF faculty and class structure, especially the many hands-on labs that enhanced the classroom learning. You picked what projects you wanted to work on. The faculty was always there to give advice and answer questions, and the class sizes were small and conducive to learning. As I mentioned before, I took on the project of building a completely automated soybean pressing operation while in school. It took three years to complete, but it was fully functional before I graduated. It has a seed cleaner to clean out the rocks and pods from the beans before they are augured into the bin. The beans are then pressed and the oil is run through a centrifuge that I designed and built to clean and degum the

oil. The oil is then stored in a bulk tank before it is made into biodiesel. The biodiesel is burned in the tractors at the lab farms and in the lawn mowers on campus. One byproduct of pressing soybeans is soybean meal. This is collected and fed to the cows on the lab farm. It is a continuous process, and that helps make the campus self-sustaining. It was a big success!

Cargill Kitchen Solutions came to UWRf to recruit new engineers. I attended the session that they led, met some of the right people, and it all went on from there. My advisor recommended me for the job that I had my eye on, the company called and set up an interview, and **I landed the job before I graduated.** I had two other job offers, but I turned them down in the hope of getting employed as a process engineer with Cargill Kitchen Solutions.

Other factors that influenced me as I waited for a call-back and considered my options were the opportunity to work for a company as large and successful as Cargill, and the job's location in Monticello, Minn. I wanted to stay in the Midwest, particularly in the Minneapolis/St. Paul area.

I recently finished the training throughout Cargill's plants. I spent long hours at every plant, learning how the products are made and how the machines operate. This training will help me to do my job as a project manager for new projects throughout our plants. These projects might involve installing a new production line, adding on to one of the plants, trying to conserve water, or developing our next product.

I love the people I work with. They are all happy to be there and are eager to answer any questions I have. The work is very hands-on, and I am always busy. On any given day, I can see what I've worked on—**when the day is done, I can look around and see what I've accomplished.**

Safety is the number one priority throughout Cargill. The concern for every stakeholder's safety is expressed in the companywide objective to send all employees home from work



*"I designed and built this automated soybean pressing system in a UWRf lab. Oil is pressed from the beans and turned into biodiesel for fueling tractors on the farm where the soybeans are grown. This effort helped to make the university self-sustaining and reduce its presence on the grid."*

just the way they came to work: healthy and whole. Hard hats, safety glasses, ear protection, and steel-toed boots are required in every plant. **When I kick off my steel-toed boots at night, I feel good about the company, my work environment, and the promise of more fulfillment as I learn more and more.**

This job is not what I envisioned doing while I was growing up tinkering, but every day I like it more and more! I hope to continue working for Cargill for many years and move up through the company ranks—boots and all.



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