Science Societies

A day in the life: Brayden Blanchard

By Tess Joosse

February 24, 2025



Brayden Blanchard, an assistant professor of sugarcane breeding and quantitative genetics at the Louisiana State University (LSU) AgCenter Sugar Research Station, examines and samples the reproductive organs of the sugarcane tassel. Photo courtesy of Brayden

Blanchard.

What can you do with a career in agronomy, crop, soil, and environmental sciences? In our new series "A Day in the Life," we'll introduce you to some members of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science of America (SSSA) doing cool things with our sciences. First up is Brayden Blanchard, an assistant professor of sugarcane breeding and quantitative genetics at Louisiana State University (LSU) Agricultural Center. Born into a five-generation sugarcane farming family in Louisiana, he works at the LSU Sugar Research Station in St. Gabriel, LA to develop new and improved sugarcane varieties for growers in the state. "I love the crop," Blanchard says. "Getting into breeding … was my way of being involved in all of it."

This interview has been edited for length and clarity.

CSA News: If you're on an elevator with someone and they ask you what exactly you do, how do you sum it up in 30 seconds?

Brayden Blanchard: First and foremost, I'm a sugarcane breeder. I provide our industry with improved varieties for them to be able to sustain and progress their yields. The second portion is evaluating our current breeding program and assessing all the different areas where we can improve it: evaluating different technologies and how they can be useful for our pipelines, how we can improve every bit of its selection accuracy, assessing the whole pipeline to see where we can modify and adjust for improvements and be able to keep providing varieties for our industry.



Blanchard passes whole sugarcane stalk samples through a shredder so the samples can be analyzed for sucrose content traits. Photo courtesy of Brayden Blanchard.

CSA News: What made you interested in sugarcane breeding? Could you talk a little bit about your path to your current position?

Blanchard: I started out as a grower; I grew up on a family sugarcane farm. I'm the fifth generation involved in sugarcane, so it's very much ingrained in my upbringing. I worked on the farm all throughout high school [and] then decided to pursue a degree in crop science for my undergrad at LSU. When I started, I met the team here at the Sugar Research Station where the breeding program is housed and started working here as a student worker. I did that for the whole four years of my undergrad while I was working towards that degree.

It was kind of an inevitable thing for me. I even got to a point where, towards the end of my undergrad, I felt kind of like, “Do I have tunnel vision here?” That's why in my junior and senior year I started to venture out and go see different areas. I traveled a little bit, I learned about different industries, learned a little bit about different crops. That was kind of my own way of trying to force myself to get outside of my comfort zone, but it really just further solidified my desire to work here in sugarcane.

I came back and started immediately after undergrad as a full-time research associate for the program and also part-time Ph.D. student. A really attractive part of [breeding] was [developing] this tangible that we can provide to the industry: here's a new variety that you'll be able to grow on your farm and produce greater yields or improve traits because of it.



Blanchard stands in one of his diversity panel variety trials. Photo courtesy of Brayden Blanchard.

CSA News: What's your work environment like now? And do you work independently, or in teams?

Blanchard: My appointment is 100% research. A lot of it is solo work, but I'm building my lab right now. I have a group of student workers and research associates that work with me as well.

It's a lot going on at once. It's anything from field work to greenhouse work to high-level computing analysis. Sometimes it's planting a test for next season, sometimes I'm collecting data for ongoing projects, presenting, talking to stakeholders, and planning for the next year. I do a lot of writing as well. Sometimes I'm instructing my technician here on what crosses to make, or what parents to choose, and I'm instructing my technicians on what varieties to select from this stage to advance to the next stage. Meanwhile I'm looking at data to present to the stakeholder groups to see what varieties we should release next year to the commercial growers. I like being involved in as much of the program as possible from what parents should we use all the way down to what variety is good enough to release to our growers.



Blanchard (yellow shirt) conducts a tour of the LSU AgCenter Sugar Research Station with (l to r) Sen. Bill Cassidy (LA), Sen. John Boozman (AR), and the Vice President of the LSU AgCenter and Dean of the LSU College of Agriculture, Dr. Matt Lee. Photo courtesy of Brayden Blanchard.

CSA News: What's the most challenging part of your job? And what's the most rewarding part?

Blanchard: I would say time management is challenging. It's challenging to juggle all of that. Especially wanting to be there in all of it—as a breeder, you make these selections and then you just can't wait to see what they look like next year in a different trial. Imagine that feeling you get when you're growing your home garden, and you put in all

this effort into growing your tomato plants, and then at the end of the season, you want to see it. You want to watch it grow, and you have this fruit that you can finally pick and bring to the kitchen. And that's such a rewarding feeling. I feel the same way in my variety trials that we've put years of work into. I just can't wait to see it next season, and what it does in the next trial. Juggling my time, wanting to be everywhere means that yes, time management gets to be very challenging but very doable and very rewarding.

CSA News: What might surprise people about the work you do?

Blanchard: What I've learned typically surprises people, and really, what simultaneously surprises me, is the amount of people that I've encountered that had no idea that industries need breeding programs to continue to improve yield. What's the point of having so many varieties? When you explain to people that the nature of a breeding program is to continually make them better, which is what we have to do to feed populations with increasing demand on the world food supply, it's always surprising to people how important it is. When you put it into perspective and you say, "Well, when you go to the grocery store, there's not just one type of apple there, right? There's a bunch of different varieties of apples." The magnitude of impact, I think, is typically very surprising to people.

CSA News: What do you like to do outside of work in your free time?

Blanchard: I'm very much an outdoorsy person. I have two dogs and I enjoy taking them places. My fiancé and I actually just recently built a tiny home that we put on a beautiful piece of property out in the country. It's very quiet and very secluded. I love spending time out there outdoors in nature, fishing, spending time with my fiancé, my dogs, my family.

CSA News: What advice would you give to an aspiring plant breeder?

Blanchard: I think probably my best advice would just be to just ask questions. If you're really considering extending your education and doing some sort of postgraduate degree, ask questions about your professors' research. Ask them what their lab is doing, ask them what kind of projects they're engaged in. As a student, I remember so many instances where you feel like, "oh, well, I shouldn't ask questions because maybe that exposes my ignorance." Your grades are always going to be important, but they're almost not as important as you understanding what you're learning. And to me, I always learn the most by just asking. And I think that should remain a consistent theme throughout a career in plant breeding as well.

Dig deeper

Check out this CSA News story featuring Blanchard's research on LCP 85-384, an important sugarcane variety in Louisiana, here: https://doi.org/10.1002/csan.21355

Text © . The authors. CC BY-NC-ND 4.0. Except where otherwise noted, images are subject to copyright. Any reuse without express permission from the copyright owner is prohibited.