

INNOVATION Q&A

TODD KRONE

PowerPollen CEO

BY KATE HAYDEN

What would agriculture look like if producers had direct control over the pollination timing of their crops? In 2015, agtech startup PowerPollen co-founders Todd Krone and Jason Cope began experimenting in Krone's garage with corn pollen preservation and application methods. Six years later, Ankeny-based PowerPollen has patented its preservation and application technology and markets directly to seed producers in the agricultural industry.

Krone, now CEO of PowerPollen, shared his observations on growth, opportunities and challenges while leading the company with Cope, chief intellectual property officer.

"PowerPollen's mission is to make agriculture more sustainable. We're starting with the seed industry and will soon be coming to the corn grain industry and to farmers," Krone said. "We're continuing to meet the challenge that's before us."

HOW DO YOU DESCRIBE POWERPOLLEN TO OTHERS?

PowerPollen is a biotech company that has a technology for pollen preservation, corn in particular. When you can preserve corn pollen, which really hasn't been done in the history of agriculture, you can control reproduction. When you can control reproduction, you can improve the seed production process and make it much more efficient. You can make hybrids or products that seed companies couldn't make before, so it enables not only a more efficient process but an innovative process that creates products that didn't exist.

HOW DO YOU DEFINE INNOVATION FOR YOURSELF?

I would define it as translating new information into something that has value and never existed before. There's a book called "Zero to One" [by Peter Thiel]. The concept is not just improving something, it is making something that didn't exist before.



PHOTO BY DUANE TINKEY

The concept is going into a truly new space, where you're changing the paradigm. Paypal is an example of this, where all of a sudden people could control getting their money to each other not going through the old channels. In our case, our zero-to-one invention is being able to make products for a seed company that they couldn't make before. The current system of making hybrids is about 100 years old and it has limitations. There's certain products it can't make, and those it does are fairly expensive to make. We can make them less expensive and enable new products.

WHAT ARE THE OPPORTUNITIES FOR GROWTH THAT YOU SEE IN THE BIOSCIENCE AND AGTECH INDUSTRIES RIGHT NOW?

Farmers have always had to be sustainable – or they couldn't stay in business. They had to conserve their slope. They were sustainable and controlled erosion in the 1960s, '70s and '80s. There's a lot of good stories there, but there's an opportunity now to become even more sustainable, to be even more carbon neutral and to get even better about that. The example I use is land use, to get more per acre for the same inputs than we've gotten in the past. Our value proposition and opportunity with the seed industry is to have a better sustainability picture per acre for land use, for seed production.

WHAT ARE SOME OF THE CHALLENGES FACING THE BIOSCIENCE AND AGTECH INDUSTRIES IN IOWA?

The key to growth and advancements in agtech and biotech is related to startups, and the innovation that comes with those startups. The challenge for Iowa is a better startup ecosystem and environment. That could go for really any state, outside of the coasts.

Developing a better startup ecosystem with better availability to capital in Iowa will be important for the future of this startup ecosystem, and the success of agtech and biotech. There are many programs we've taken advantage of in the state of Iowa, and there is a great network here and availability to investors that we've taken advantage of. We feel that we've had a lot of success here. But that ecosystem can improve.

WHAT ARE SOME INITIATIVES POWERPOLLEN IS LOOKING AT RIGHT NOW THAT YOU'RE EXCITED ABOUT?

We're excited about that next market. We're currently commercialized in the seed market, meaning that the seed company is the customer. The next market is the farmer as the customer. We're really starting to

translate the current technology into how it would work for the farmer. We're excited to see that come to fruition. We've got an important demonstration this summer to show how that would work, how we could bring both higher yield and higher-value grain to the farmer, by adding a higher-value trait to the system. ... This initiative that we're just starting to demonstrate would likely be commercial in 2024, and then to really get to the ideal vision and continue to improve it, it would likely be within the course of the next five years after that.

HOW DOES YOUR LEADERSHIP TEAM AT POWERPOLLEN MAKE THOUGHTFUL COMPANY DECISIONS IN TIMES OF GREAT UNCERTAINTY?

It's not just the pandemic that brought uncertainty: It's the pace of technology that brings uncertainty. You cannot make decisions with certainty in this environment, and you have to always be ready to pivot and adjust when you get more information. That's what our leadership team does.

If it doesn't cost you anything, delaying a decision is fine. Make decisions when you have more information. If you have to make a decision, be ready to pivot and be able to reverse direction – know exactly how you'll do that.

WHAT PRESSING GLOBAL CHALLENGE COULD IOWA TECHNOLOGY COMPANIES PLAY A KEY ROLE IN?

The most pressing global challenge that Iowa companies can play a role in, particularly biotech and agtech, is the dual need to produce more food and do it in environmentally sound ways. It can be done. The other piece of that is to do it in an economically feasible way, and there are ways to do that. It's probably the most pressing issue for the globe right now – not only how to feed 10 billion people by 2050, but how to do it in a sustainable way. I think Iowa's in a great place to do that with the companies that are building here. ■

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