



Göttingen, 12<sup>th</sup> of April, 2024

Dear CiBreed community,

Today, you receive this CiBreed newsletter because we would like to inform you about the latest developments at the Center for Integrated Breeding Research.

## The 5<sup>th</sup> CiBreed Fall Workshop



The 5<sup>th</sup> CiBreed Fall Workshop took place last October, once again in the historic building of the Göttingen State and University Library. This time 94 people participated, and 20 posters and 14 talks from 10 different institutes and universities were presented. The theme of the two-day workshop, which was organized by the Department of Forest Genetics and Forest Tree Breeding, was "Facing the future". The four sessions captured topics of forest genetics and breeding, climate change, innovative technologies and phenomics. Keynotes were given by Henrik Hartmann (Julius-Kühn Institut in Quedlinburg), Stefan Paulus (ifZ), Elizabeth Ross (University of Queensland) and Pär Ingvarsson (Swedish University of Agricultural Sciences). The intensive exchange between scientists and students from different fields can be an example of how the gap between research in tree, plant, animal and mushroom cultivation can be bridged. In our lively poster session, the presentations were complemented by many innovative projects from both young and experienced researchers. In the evening, a BBQ-dinner was organized in the new greenhouse facilities at the north campus. In these facilities, we were also able to take a look at the impressive new technologies in the new greenhouse, which gave us ideas for exciting future experiments.







## Rooting in CiBreed: A warm welcome to Prof. Dr. Hannah Schneider

From 2023, the CiBreed community welcomes its newest member, Prof. Dr. Hannah Schneider, bridge professor for root science between the University of Göttingen and the **Leibniz Institute of Plant Genetics and Crop Plant Research (IPK)**. To get to know her and her research a little better, we asked her for an interview:

### **Why did you specialize in root science? What caught your interest in this field?**

*I find studying root biology very fascinating. There are not many people who study roots and there are still so many unknowns about how root anatomy and architecture influence water and nutrient uptake, interactions with the microbiome and rhizosphere, and ultimately plant growth and performance. Using genetic and physiological approaches my research focuses on understanding the development of root traits, their functional implications for soil resource capture, and environmental cues that regulate the expression of root traits.*

### **How would you describe your work/research in one sentence everyone could understand?**

*We study the anatomy and architecture of crop roots to identify and understand traits that enable plants to take up and use nutrients and water more efficiently.*

### **What was your path towards your professorship / what is your (academic) background?**

*After completing my BSc at the University of Minnesota (USA), I started a PhD program at Penn State University (USA). During my PhD program, I did a research stay at the Forschungszentrum Jülich studying barley root anatomy for improved nutrient and water capture. After my PhD, I started a postdoctoral researcher position at Penn State University, focusing then on the physiology and genetics of maize root anatomy and architecture. Afterward, started a position as an assistant professor of crop physiology at Wageningen University, where I led a group studying root traits in a wide range of plant taxa including potato, rice, maize, wheat, and faba bean. In 2023, I established an independent Root Science Research Group in a joint appointment between the University of Göttingen and the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK).*

### **What was your motivation to apply for the bridge professorship?**

*The topic of the bridge professorship was a perfect fit for my research interests in understanding the genetic control and physiology of root traits in different species and environments. I*

*was drawn to the fact that I could both teach and interact with students and faculty at the University of Göttingen and also utilize the research infrastructure and gene bank at the IPK.*

### **Are there opportunities for (iPAB) students to do their internship with your group in IPK?**

*Yes! There are a lot of opportunities for Bachelor and Master students to do an internship or thesis research in my group (Genetics and Physiology of Root Development) at the IPK in Gatersleben. We have a lot of field, greenhouse, and laboratory facilities that provide a lot of opportunities for different types of research on the topic of root biology.*

### **What courses are you going to teach & when will they start?**

*I will teach a block course in the spring semester on the topic of root physiology. Part of the course will be based in Göttingen and part of the course will be based at the IPK. The course will be focused on root development and function and contain a combination of lectures and practical hands-on exercises with state-of-the-art root phenotyping facilities at the IPK.*

### **What are your favorite activities outside of work? / What hobbies do you engage in?**

*In my free time, I enjoy hiking and exploring nature. Living in Gatersleben offers many opportunities to explore the Harz mountains nearby. I also enjoy traveling and try to visit my sisters in the USA a few times per year.*



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## Welcoming the new iPAB students!

The CiCom Team heartfully welcomes new iPAB master students! We are thrilled to have you join our international community of enthusiasts dedicated to enhancing agriculture through innovative breeding techniques. As you get on this academic journey, expect to dive into the fascinating world of genetics. Our program emphasizes hands-on learning, ensuring you gain practical skills alongside theoretical knowledge, building a basis for your future career in breeding companies or research institutions. Whether you're passionate about cultivating resilient crops or improving livestock genetics, you'll find a supportive environment here to nurture your scientific interests and foster growth. Feel free to connect with fellow



students and faculty members, as collaboration is key to success in our field. Get ready to explore, experiment, and contribute to the future of sustainable agriculture and food security. Once again, welcome aboard!

## UPCOMING EVENTS

### CiBreed Week

The CiBreed-Week will be organized as an excursion to Böhm-Nordkartoffel (BNA) and to the KWS Talent campus of the 4<sup>th</sup> and 7<sup>th</sup> of June. Stay tuned for updates!

### CiBreed Fall Workshop



Due to various circumstances, the CiBreed Executive Board has had to decide that it will not be possible to hold the annual and CiBreed workshop in 2024. We very much regret that we will not be able to welcome you this year in Göttingen. Nevertheless, please remain with us sign up for the CiBreed Newsletter to keep up to date with the latest CiBreed developments and activities.

We use social media platforms such as X, Instagram, LinkedIn to inform people about research being done by the groups affiliated with CiBreed.

Feel free to contact us:

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Thank you,

*The CiCom-Team*

**CiBreed**   
Center for Integrated Breeding Research

