

focus on Careers at Niab

CROP RESEARCH LEADER – TALLY WRIGHT

Your role at Niab

I lead a Cambridge-based research group focused on crop quantitative genetics. This research field uses statistical modelling to explore the relationship between DNA markers and complex phenotypes controlled by many genes. Our goal is to uncover novel genetic variation that can advance crop genomics and support more sustainable agriculture. Day-to-day, this involves scripting, exploring novel analysis approaches, statistical modelling, and plenty of data quality control. While we typically work with major crops like wheat and barley, we have recently expanded our portfolio to include other species, such as an African orphan crop. We are also developing tools for the scientific and plant breeding community, including a user-friendly online tool for genetic mapping across several key crop species.

Your previous experience

I'm a scientist from a Cambridgeshire farming background. Following my BSc in Marine Biology, I transitioned to drier pursuits, shifting from ocean depths to slightly drier wheat fields. In 2013, I joined Niab as a research assistant in the pre-breeding department. I have since completed a PhD at Niab while studying at the University of Cambridge. After graduating, I worked as a postdoctoral researcher in Niab's crop quantitative genetics team, which I began leading in 2022.

Your qualifications

- BSc (Hons) in Marine Biology
- MRes in Biological Sciences
- PhD in Wheat Physiology and Quantitative Genetics

Your future

Niab has developed over 10,000 wheat genotypes that incorporate underutilised genetic diversity from wild relatives and landraces. Using a combination of modelling and prediction, my aim is to apply quantitative genetics to identify genomic regions absent from the modern wheat gene pool that can help resolve challenges faced by agriculture. This work will involve securing research council funding to support Niab's important research and sharing our results to the scientific community through high-impact publications.

