

## ASPB Pioneer Member

### Mechthild Tegeder

Dr. Mechthild Tegeder received her PhD from the University of Göttingen, Germany and did her post-doctoral research at the University of Newcastle, Australia. She then was a research group leader at the University of Tübingen, Germany before she accepted a faculty position at Washington State University (WSU), Pullman. At WSU, she has spent over two decades focusing on research in nitrogen transport, partitioning, and nitrogen use efficiency in plants with the ultimate goal of improving crop production.

Dr. Tegeder is an international leader in plant nitrogen research. She has been at the forefront of research on amino acid and ureide transporter function in plants. Major breakthroughs have been achieved by manipulating nitrogen transporters in model and crop plants, and by applying complex biochemical, physiological, genetic, molecular and cell-biological analyses. The Tegeder lab has identified key players in organic nitrogen transport processes in source and sink organs and resolved that transporter function is essential for nitrogen acquisition, source-sink partitioning and seed loading. Mechthild's lab has demonstrated that changes in nitrogen transport strongly affect primary metabolism and lead the physiological adjustments at the whole plant level.



She discovered that nitrogen transport to seeds can be altered by genetic engineering, resulting in increased seed development and seed protein levels, and better plant N use efficiency. Overall, Dr. Tegeder's work demonstrates that nitrogen transport processes are essential for maximizing plant productivity and seed nutritional quality while optimizing nitrogen use.

Dr. Tegeder is a prolific and highly cited author and has received many accolades and awards during her tenure at WSU. These include being inducted into the Washington State Academy of Science, named the Herbert L. Eastlick Distinguished Professor in her college, and recognized for her outstanding Faculty Peer Mentoring. Recently, Mechthild received the WSU Catalyst Award for her "major breakthroughs in nitrogen partitioning research key to current understandings of nitrogen transport processes and their relationships to plant productivity and seed nutritional quality".

As a co-organizer or committee member for many international meetings, Dr. Tegeder has strongly promoted participation by new, diverse faculty and students. Mechthild is also a co-lead of an international exchange program,

partially funded by NSF's IRES initiative, between WSU students and with Germany's Cluster of Excellence on Plant Sciences, which is comprised of the Universities of Cologne and Düsseldorf, the Max Planck Institute for Plant Breeding Research, and the Forschungszentrum Jülich Research Institute, emphasizing global collaboration in crop research.

Dr. Tegeder brings her passion for science to the classroom. She inspires and challenges her students and engages them in informative discussions. Mechthild cares about the students and their successes. Her enthusiasm, efforts and sincere engagement in student education are also reflected in the excellent student evaluations she consistently receives.

Dr. Tegeder devotes a significant amount of time to student and faculty mentoring and development by providing advice and strategies to undergraduate, graduate and postgraduate students, as well as to colleagues for their advancement in education, research, personal growth and gratification. In addition, she is heavily invested in formal faculty mentoring and provides faculty with support and encouragement. Her advice and guidance help junior faculty develop a realistic career advancement plan, a concrete promotion plan, and strategies to achieve their plans.

Mechthild's enthusiasm and pursuit of excellence is well noted by her peers, collaborators, and current and former students.

[Mechthild Tegeder - Google Scholar](#)