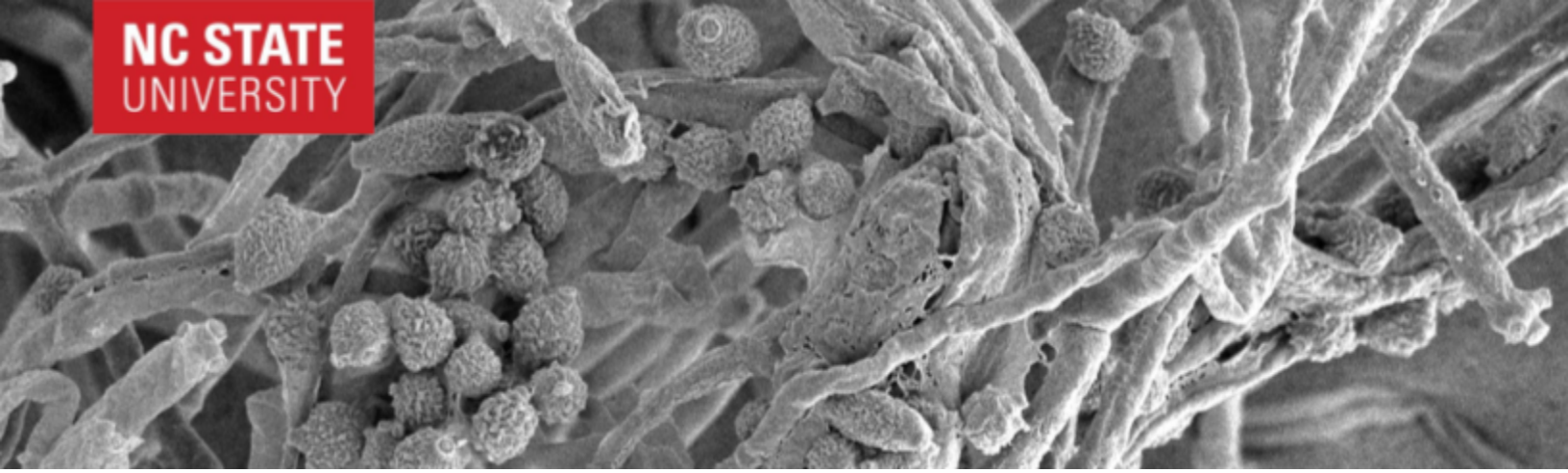

21st Century Diversity in Plant Breeding

2nd Biennial Graduate Student Plant Breeding Symposium
NC State University, Hunt Library, Multipurpose Room (2nd floor)
Tuesday, February 4, 2014

Lunch will be served. The symposium is followed by a reception.

Registration

Registration deadline is January 30, 2014.
Registration space is limited, please email Jill Recker with any registration questions.

Symposium Schedule

8:00 - 8:30	Registration with light refreshments
8:30 - 9:30	Sally MacKenzie
9:30 - 10:30	Kevin Smith
10:30 - 11:00	Morning break with refreshments
11:00 - Noon	Ellen Leue
Noon - 1:30	Buffet Lunch with optional library tour starting at 1:00 pm
1:30 - 2:30	Charlie Brummer
2:30 - 3:30	Steve McKeand
3:30 - 3:45	Open Q&A for all speakers
3:45 - 5:00	Reception with light hors d'oeuvres and beer and wine

Featured Speakers

A Novel System for Epigenetic Breeding in Crops

Dr. Sally Mackenzie, University of Nebraska-Lincoln

Sally Mackenzie is the Ralph and Alice Raikes Professor of Plant Science in the Center for Plant Science Innovation at the University of Nebraska-Lincoln. She received her training in plant biology (B.S. 1981) at the University of California, Davis, and in plant breeding (M.S.) and plant molecular genetics (PhD 1986) from the University of Florida in Gainesville. She served on the faculty of the Department of Agronomy at Purdue University from 1988-1999, where her research focused on nuclear-mitochondrial genetic interactions related to plant reproductive adaptation. At that time, her group showed that plants have the capacity to alter their mitochondrial genome configuration to effect changes in pollen viability, providing a mechanism to adjust between circumstances of reproductive isolation and outcrossing. She then moved to UNL in 1999, where the lab continues to study organellar influences on plant development and adaptation, identifying a linkage between plastid behavior and epigenetic changes in plants. Mackenzie is an elected fellow of AAAS and ASPB. and serves on the Executive Committee, the Publications Committee and the Public Affairs Committee of the ASPB, and on the Section O committee of AAAS.

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Implementing Genomic Selection in a Barley Breeding Program

Dr. Kevin Smith, University of Minnesota

Dr. Kevin Smith is a Professor in the Department of Agronomy and Plant Genetics at the University of Minnesota. He conducts research in small grain genetics, and is the current leader of one of the oldest public barley breeding programs in the U.S., dating back to the early 1920's. His primary focus is development of cultivars suited to the malting and brewing industries. His research interests are in the genetics of complex traits and the application of genetics and genomics to crop improvement. He is a pioneer in the application of genome wide selection to small grain improvement. Kevin obtained a B.S. in Botany with an emphasis in Environmental Studies (1984), and M.S. (1992) and PhD. (1997) degrees in Plant Breeding and Plant Genetics, all from the University of Wisconsin-Madison. He teaches undergraduate biology and directs graduate student research. Kevin has filled several leadership positions in the U.S. Wheat and Barley Scab Initiative, the Crop Science Society of America, and both the Barley Coordinated Agricultural Project (BCAP), and Triticeae Coordinated Agricultural Project (TCAP).

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And now for something completely different: Innovation through breeding and product development

Dr. Ellen Leue, PanAmerican Seed Company

Ellen Leue – received BS in Agriculture from Cornell in 1975, and PhD in Plant Breeding and Genetics, University of Wisconsin in 1983. Ellen has since spent her entire career working for Ball Horticultural Company as both plant breeder and in research and product development management. During this time she had the opportunity to work on dozens of species, exploring opportunities for improvement, and working with sales, production and seed technology to commercialize many industry firsts in ornamental seed and vegetative products. Around 2009 she initiated an exploration of home garden vegetables. She currently heads up a small team dedicated to developing herbs and vegetables for both home garden and direct-marketing growers."

Breeding forage crops in a changing climate: Goals and Challenges

Dr. Charlie Brummer, Samuel Roberts Noble Foundation

Charlie Brummer is the Director of the Forage Improvement Division at the Samuel Roberts Noble Foundation and conducts research on alfalfa and tall fescue breeding and genetics. He received his B.S. degree from the Pennsylvania State University and his M.S. and Ph.D. degrees from the University of Georgia. Previously, he was on faculty at Iowa State University and the University of Georgia as the forage and bioenergy crop breeder. He was raised on a diversified farm in central Pennsylvania. Dr. Brummer's research program focuses on practical cultivar development, germplasm evaluation and selection, breeding methodology improvement, and application of genetic markers to forage breeding. His research has been funded by USDA and DOE competitive grants, and contracts from several breeding companies. He has authored or co-authored over 140 refereed journal articles and book chapters, and presented numerous invited presentations nationally and internationally. He has advised 14 MS and PhD students and served on graduate committees of over 60 students.

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50+ Years of Southern Pine Tree Breeding at NC State University - A Living Success Story

Dr. Steve McKeand, North Carolina State University

Dr. Steve McKeand has been a Professor of Forestry and Environmental Resources for over 30 years and is Director of the Cooperative Tree Improvement Program (http://treeimprovement.org) at North Carolina State University. Members of the NC State Tree Improvement Program are responsible for developing the genetic resources of loblolly pine and other southern forest tree species that are planted on almost 1 million acres per year. In addition to directing the program, Steve conducts research in support of the Tree Improvement Cooperative, teaches graduate and undergraduate courses on forest genetics, and directs graduate students. Steve received his BS in Forestry from Purdue University in 1976 and his MS in Forest Genetics in 1978, also from Purdue. In 1983, he completed his PhD in Forest Genetics at NC State University. After graduation, he was hired at NC State in a full time faculty position.

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Please direct any questions or concerns regarding the symposium to Dr Charlie Stuber.

Hosted by the NC State University Plant Breeding Graduate Student Association, affiliated with The Center for Plant Breeding and Applied Plant Genomics.

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