

Mohsen Mohammadi, PhD
Assistant Professor
Wheat Breeding and Quantitative Genetics
Department of Agronomy,
Purdue University

Contact information:
915 West State Street
West Lafayette IN
47907-2054 USA
Phone: (765) 496-6851
Fax: (765) 496-2926
E-mail: mohamm20 (at) purdue (dot) edu

Education

2003 - 2008 PhD Plant Science, University of Alberta
1998 - 2000 Plant Genetics and Breeding, University of Tehran
1994 - 1998 Agronomy and Plant Breeding, University of Tehran

Positions held

2015 - present Assistant Professor of Wheat Breeding and Quantitative Genetics
2012 - 2014 Postdoctoral Scientist, University of Minnesota
2010 - 2012 Wheat Molecular Breeder, Seed and Plant Improvement Institute, Iran,
2009 - 2010 NSERC-VF Visiting Fellow, AAFC, Ottawa, ON, Canada
2001 - 2003 Wheat Conventional Breeder, Khuzestan Agric. Res. Center, Iran

Research interests

Breeding for yield potential and resource use efficiency, selection theory and quantitative genetics, genome-wide breeding tools, root physiology and phenotyping

Teaching responsibilities

AGRY 611 Quantitative Genetics
AGRY 320 Undergraduate Genetics

Publications

1. Shukle R, Cambron S, Moniem H3, Schemerhorn B, Redding J, David Buntin G, Flanders K, Reisig D, Mohammadi M. 2016. Effectiveness of genes for hessian fly (Diptera: Cecidomyiidae) resistance in the southeastern United States. *J Econ Entomol* 109(1):399-405
2. Tiede T, Kumar L, Mohammadi M, & Smith K. 2015. Predicting genetic variance in bi-parental breeding populations is more accurate when explicitly modeling the segregation of informative genomewide markers. *Molecular Breeding* 35: 199
3. Mohammadi M, Tiede T, Smith K. 2015. PopVar: A genome-wide approach for predicting genetic variance and correlated response in bi-parental breeding populations. *Crop Science* 55: 2068-2077.
4. Mohammadi M, Budde A, Horsley R, Ullrich S, Blake T, Hayes P, Hole D, Obert D, Cooper B, Chao S, Smith K. 2015. A genome-wide association study of malting quality across eight U.S.

barley breeding programs. *Theoretical and Applied Genetics* 128: 704 – 721.

5. Mohammadi M, Endelman J, Nair N, Shiaoman C, Jones S, Muehlbauer G, Ullrich S, Baik B-K, Wise M, Smith K. 2014. Association mapping of grain hardness, polyphenol oxidase, total phenolics, amylose content, and β -glucan in US barley breeding germplasm, *Molecular Breeding* 34: 1229–1243.
6. Mohammadi M, Torkamaneh D, Patpour M. 2013. Seedling stage resistance of Iranian bread wheat germplasm to race Ug99 of *Puccinia graminis* f. sp. *tritici*. *Plant Disease* 97: 387-392.
7. Mohammadi M, Anoop V, Gleddie S, Harris L. 2011. Proteomic profiling of two maize inbreds during early gibberella ear rot infection. *Proteomics* 11: 3675-3684.
8. Mohammadi M, Kav N, Deyholos M. 2008. Transcript expression profile of water-limited roots of hexaploid wheat (*Triticum aestivum* var. Opata). *Genome* 51:357-367.
9. Mohammadi M, Kav N, Deyholos M. 2007. Transcriptional profiling of hexaploid wheat (*Triticum aestivum* L.) roots identifies novel, dehydration-responsive genes. *Plant, Cell and Environment* 30: 630–645.

Conference Presentation

1. Daba* S, Tyagi P, Bockelman H, Brown-Guedira G, & M. Mohammadi. 2017. Association genetics of kernel weight, a component of sink strength, in a historical US wheat population (poster presentation). PAG XXV - Plant & Animal Genome Conference. January 14-18, 2017. San Diego, CA, USA
2. Bajgain* P, Daba S, Tyagi P, Brown-Guedira G, & M. Mohammadi. 2017. Population genomics and signatures of selection in a historical and contemporary soft red winter wheat population (poster presentation). PAG XXV - Plant & Animal Genome Conference. January 14-18, 2017. San Diego, CA, USA.
3. Mohammadi* M, Tyagi P, Daba S, Beyer S, Bockelman H, Brown-Guedira G. 2016. Association genetics and candidate gene identification for root length and branching in a historical and modern US wheat population (poster presentation). 4th International Plant Phenotyping Symposium. December 13 – 15, 2016. International Maize and Wheat Improvement Center (CIMMYT). Mexico.
4. Daba* S, Gaire R, & M. Mohammadi. 2016. Evaluation of germplasm resistance to Fusarium head blight disease (poster presentation). 2016 National Fusarium Head Blight Forum. St. Louis at the Arch, MO. USA. USWBSI - US Wheat and Barley Scab Initiative.
5. Mohammadi M, Beaubien K, Smith K. 2014. Six-row barley for all-malt beer (to be presented at the 21st North American Barley Researchers Workshop - NABRW)
6. Mohammadi M, Smith K. 2013. Genomic regions associated with malt quality traits in barley. International Plant & Animal Genome XXI / January 12-16, San Diego, CA, USA
7. Harris L, Bosnich W, Johnston A, Woldemariam T, Reid L, Schneiderman D, Mohammadi M, Gleddie S. 2012. Defining gibberella ear rot resistance using genomic approaches. Mycored North America, June 24-28, Carleton University, Ottawa, ON, Canada
8. Harris L, Bosnich W, Johnston A, Schneiderman D, Woldemariam T, Reid L, Mohammadi M, Gleddie S. 2011. Mapping gibberella ear rot resistance in maize using a large B73 X C0441 F₆ recombinant inbred population. Proceedings of the 7th Canadian Workshop on Fusarium Head Blight, November 27-30, Winnipeg, MB, Canada