Ruijuan Tan, Ph.D.

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EDUCATION

Michigan State University, East Lansing, MI
August 2018

Ph.D. in Plant Breeding, Genetics, and Biotechnologies

Henan Agricultural University/Michigan State University, China/USA
June 2013
M.S. in Plant Pathology

Beijing Agricultural College, China
January 2005
B.S. in Agronomy

RESEARCH EXPERIENCE

Michigan State University, East Lansing, MI

Postdoctoral Research Associate PI: Addie Thompson 2019.2- present

- Dissecting the genetic control of the plant architecture-related traits in Maize
- Deploying genomic prediction for the traits with different heritability in Maize
- Calibrating the power function for maize total leaf area estimation
- Validation of Unmanned Aerial Systems (UAS) measurements to manual phenotyping
- Developing a high throughput phenotyping platform (HTP) based model for nitrogen fixation in dry bean

Michigan State University, East Lansing, MI

Research Assistant PI: Dechun Wang 2013.8-2018.8

- Dissected the genetic architecture underlying field resistance to sudden death syndrome (SDS) in soybean using bi-parental QTL mapping approach
- Led soybean marker-assisted selection for aphid, phytophthora, and SCN resistance
- Organized the crossing of soybean breeding materials in the field
- Cooperated with several institutes within North Central Soybean Research Program for soybean sudden death syndrome regional test and executed the trial at Michigan
- Participated in the field evaluation of soybean commercial trials and breeding materials
- Coordinated with the researchers from Plant pathology department on the study of resistance to SDS phytotoxins

- Assisted the phenotyping, genotyping, and analysis in the resistance breeding for aphid, white mold, and Pythium

Michigan State University, East Lansing, MI

Temporary Research Assistant PI: Dechun Wang 2012.3 -2013.5

- Compared different methods for linkage map construction using high-density SNPs
- Executed the SNP BeadChip genotyping with Illumina system
- Participated in soybean crossing, field evaluation, and harvesting
- Developed the greenhouse bioassay for soybean sudden death syndrome screening

Henan Agricultural University, Zhengzhou, China

Graduate student researcher PI: Honglian Li 2010.9-2011.8

- Assisted the project of "risk evaluation of cereal cyst nematode and its management in wheat"
- Performed the temporal phenotyping of cereal cyst nematode

Beijing Agricultural College, Beijing, China

Intern PI: Wenlin Jin 2001.3-2005.1

- Investigated the spatial distribution patterns of *Callosobruchus chinensis* eggs in adzuki bean fields
- Evaluated the agronomic traits of adzuki bean

TEACHING EXPERIENCE

Michigan State University, East Lansing, MI

Teaching Assistant 2016 & 2018 Spring

- Lectured the sections of linkage map construction and QTL mapping in quantitative genetics courses (CSS 941, graduate level)
- Developed the learning materials for Ici-mapping section which can be used for both linkage map construction and QTL mapping
- Solved the problems that students met during whole course learning
- Assisted the graduate students with their project analysis
- Evaluated and Graded assignments, project, and final presentations

PUBLICATIONS

R Tan, P Collins, J Wang, Z Wen, et al., (2019). Different loci associated with root and foliar resistance to sudden death syndrome (*Fusarium virguliforme*) in soybean. Theor Appl Genet. doi: 10.1007/s00122-018-3237-9

R Tan, B Serven, Z Zhang, P Collins, Z Wen, et al., (2018). QTL mapping and epistatic interaction analysis of field resistance to sudden death syndrome (*Fusarium virguliforme*) in soybean. Theor Appl Genet. doi: 10.1007/s00122-018-3110-x

Z Wen, **R Tan**, S Zhang, P Collins, J Yuan et al., (2018). Integrating GWAS and gene expression data for functional characterization of resistance to white mold in soybean. Plant Biotechnology Journal.doi:10.1111/pbi.12918

Z Wen, **R Tan**, J Yuan , C Bales , W Du , S Zhang , MI Chilvers, C Schmidt , Q Song , PB Cregan , D Wang (2014) Genome-wide association mapping of quantitative resistance to sudden death syndrome in soybean. BMC Genomics .15:809

H Chang, **R Tan**, G Hartman, H Sang, Z Wen et al., (2019). Characterization of soybean STAY-GREEN genes in susceptibility to foliar chlorosis of sudden death syndrome. Plant Physiology. doi: https://doi.org/10.1104/pp.19.00046

Ruijuan Tan, Zixiang Wen, et al. Comparison of different methods for soybean genetic linkage map construction based on high-density SNPs. Henan Agricultural University Journal, 47(6): 671-676

Wenlin Jin, **Ruijuan Tan**, et al. Preliminary analysis on spatial distribution patterns of *Callosobruchus chinesis* eggs in adzuki bean fields. Plant Protection, 30(6): 34-36