

2019 SOYBEAN BREEDERS WORKSHOP

- Breeding for Disease Resistance & Pathology

Date: February 11-13th, 2019
Location: Sheraton Westport Chalet Hotel
191 Westport Plaza Dr., St. Louis, MO
Coordinator: [Zenglu Li](#) and [David Walker](#)

Monday, February 11, 2019

Room: Versailles 1

1:00 - 2:40 p.m. Session 1: Breeding and Breeding Technologies | Chair: Zenglu Li, University of Georgia

- **1:05 p.m. Jeff Bennetzen, University of Georgia:** *Optimizing plant genotypes to improve the services provided by soil microbes*
- **Bobby Brauer, Bayer:** *Shifting the field R&D paradigm to technology driven phenotyping*
- **Bob Stupar, University of Minnesota:** *Soybean breeding with genome-editing technology*

2:40 - 3:00 p.m. Coffee Break

3:00 - 5:00pm Session 2: Breeding and Breeding Technologies | Chair: Aaron Lorenz, University of Minnesota

- **Brian Diers, University of Illinois:** *Genetic architecture of soybean yield and agronomic traits based on a NAM analysis*
- **Aaron Lorenz, University of Minnesota:** *Developing resources to advance implementation of genomic prediction in soybean*
- **Jeff Hegstad, Corteva:** *Methods for using novel diversity to improve soybean yield*
- **Jennifer Jones, United Soybean Board:** *United Soybean Board Update*

Tuesday, February 12, 2019

Room: Versailles 1

8:00 - 9:45 a.m. Session 3: Soybean nematodes | Chair: Brian Diers, University of Illinois at Urbana-Champaign

- **Brian Diers, University of Illinois:** *Overview of SCN resistance in soybean*
- **Andrew Bent, University of Wisconsin:** *Mechanisms of SCN resistance: Implications for breeding*
- **Melissa Mitchum, University of Missouri:** *Precision management of soybean cyst nematode: Pipedream or possible?*
- **Zenglu Li, University of Georgia:** *Breeding for root-knot nematode resistance*
- **Greg Tylka, Iowa State University:** *Nematode-protectant seed treatments and research results with SCN in Iowa*

9:45 - 10:15 a.m. Coffee Break

10:15 -12:00 p.m. Session 4: Soybean seedling diseases | Chair: Istvan Rajcan, University of Guelph

- **Anne Dorrance, Ohio State University:** *Resistance to Pythium spp in soybean*
- **Martin Chilvers, Michigan State University:** *Update on oomycetes of soybean*
- **John Rupe, University of Arkansas:** *Screening methods for charcoal rot in soybean*
- **Toyo Ajayi-Oyetunde, University of Wisconsin-River Falls:** *Gaining some insights into the genetic diversity of Rhizoctonia solani associated with soybean seedling diseases*
- **Richard Belanger, Laval University:** *Haplotypes and molecular detection of avirulence genes in Phytophthora sojae*

12:00 - 1:00 p.m. Lunch

1:00 - 2:45 p.m. Session 5: Lower stem and root diseases | Chair: Alemu Mengistu, USDA-ARS

- **Anne Dorrance, Ohio State University:** *An update on R-genes and quantitative resistance to Phytophthora sojae in soybeans*
- **Febina Mathew, South Dakota State University:** *Genotype -isolate interaction for resistance to stem canker in soybean*
- **Leonor Leandro, Iowa State University:** *Relationship between sudden death syndrome onset and intensity and soybean yield components.*
- **Alemu Mengistu, USDA-ARS:** *Charcoal Rot: A hidden threat to soybean yield - an update on what has been accomplished.*

2:45 - 3:15 p.m. Coffee Break

3:15 - 5:00pm Session 6: Soybean foliar diseases | Chair: David Walker, USDA-ARS

- **Daren Mueller, Iowa State University:** *Update on foliar diseases of soybean in Iowa*
- **Carl Bradley, University of Kentucky:** *Fungicide resistance: Complications arising in management of soybean foliar diseases*
- **Burt Bluhm, University of Arkansas:** *Fungicide resistance in *Cercospora kikuchii* populations in the Midsouth*
- **Istvan Rajcan, University of Guelph:** *Using genomic approaches to combat white mold, caused by *Sclerotinia sclerotiorum* in soybean*
- **David Walker, USDA-ARS:** *Soybean rust resistance in the United States: Germplasm, genes and pathogenic diversity*

Wednesday, February 13, 2019

Room: Versailles 1

8:00 - 9:30 a.m. Session 7: Reports and announcement | Chair: Zenglu Li, University of Georgia

- **SBW committee representative:** *Announcement of poster winners*
- **Michelle Graham, USDA-ARS:** *SoyGEC Report*
- **David Grant, USDA-ARS:** *Soybean genetics committee report and SoyBase.org update*
- **Dechun Wang, Michigan State University:** *Germplasm committee report*
- **From the floor:** *Recognitions, retirements, and announcements*
- **SBW committee representative:** *Discussion on the future workshop venue*

9:30-11:00 a.m. Session 8: Breeding and Genetics | Chair: Raymond Kennett, BASF

- **Marcelo Oliveira, Embrapa-Soja:** *Soybean breeding at Embrapa and in Brazil*
- **Malli Gelli, Corteva:** *Genomics assisted haplotype characterization and identifying novel trait-associated variation*
- **Mariola Klepadlo, University of Missouri:** *Genetic association between reniform nematode and soybean cyst nematode resistance in soybean*

Breeders workshop ends

Technicians Workshop

Date and time: 1:00 pm, Feb 11th - 5:00 pm, Feb 12th, 2019

Organizer: Troy Cary

Room: St. Moritz and Bern

USB Seed Composition Workshop

Date and time: 1:00 pm, Feb 13th – 4:00 pm, Feb 14th, 2019

Organizer: Kelly Whiting

Room: St. Moritz and Bern