

# 2018 SOYBEAN BREEDERS WORKSHOP

- Breeding for Insect Resistance & Entomology

## Registration in Versailles Foyer

Monday, Feb 12<sup>th</sup> 10:30 AM – 05:00 PM

Tuesday, Feb 13<sup>th</sup> 07:00 AM – 05:00 PM

## Monday Feb 12<sup>th</sup>, 2018 | Room: Versailles 1

Start	End	Speaker	Topic
1:00	1:10	Zenglu Li, University of Georgia	Welcome and announcements Recognition of SBW organizers and CSB
<b>General session: Breeding and Breeding Technologies</b>			
1:10	1:40	Tommy Carter, USDA-ARS	Soybean Breeding = Genomics + Phenomics - Or does it?
1:40	2:10	Wayne Parrott, University of Georgia	Genome editing, hype and hope
2:10	2:40	David Hyten, Univ. of Nebraska	Development of sequencing for genotyping within soybean breeding programs
<b>2:40</b>	<b>3:00</b>	<b>Coffee Break</b>	
3:00	3:30	Felix B Fritschi University of Missouri	Exploring soybean root architecture – genetic diversity, markers, and improvement
3:30	4:00	Anne B. Alerding, Virginia Military Institute	Phenotypic plasticity in branching: implications for seed production in determinate and indeterminate cultivars
4:00	4:35	Tom Oswald United Soybean Board	From the ground up, we're all part of the food chain
4:35	4:55	Khalid Meksem, Southern Illinois University	Soybean cyst nematode disease resistance: an update
4:55	5:00	Zenglu Li University of Georgia	Announcements and Adjourn
<b>5:00</b>	<b>6:00</b>	<b>Poster session</b>	<b>Versailles 2</b>

## Tuesday Feb 13<sup>th</sup>, 2018 | Room: Versailles 1

Continental Breakfast | 7:00 am - 8:00 am | Versailles Foyer

Hosted by the Commercial Soybean Breeders

Start	End	Speaker	Topic
<b>Session I: Aphids</b>			
8:00	8:05	David Walker, USDA-ARS	Program Chair/Session Convener
8:05	8:35	Doris Lagos-Kutz, USDA-ARS	Midwest Suction Trap Network/Evaluation of soybean aphids to soybean genotypes that contain <i>Rag</i> genes and PI 437696
8:35	9:05	Sophia Conzemius, South Dakota State University	Spill the beans! Soybean aphid biotype 4 resistance in <i>G. soja</i> and soybean accessions
9:05	9:35	Jessica Hohenstein, Iowa State University	"Refuge-in-a-bag" approach for sustainable management of virulent soybean aphids in the field
9:35	10:05	Jonathan LaMantia, USDA-ARS	Mapping soybean aphid biotype 3 and 4 Resistance in PI 606390A
<b>10:05</b>	<b>10:20</b>	<b>Coffee Break</b>	
10:20	10:50	Brian Diers, University of Illinois	Effectiveness of <i>Rag</i> gene pyramids in controlling soybean aphid biotypes
10:50	11:20	Dechun Wang and Paul Collins, Michigan State University	Aphid resistance from <i>Glycine soja</i> and effects of aphid resistance gene combinations
11:20	11:50	Gustavo MacIntosh, Iowa State University	Exploring the molecular effects of gene pyramiding to control soybean aphids
11:50	01:00	Lunch	
<b>Session II: Other insects</b>			
1:00	1:00	Jonathan LaMantia, USDA-ARS	Session Convener
1:00	1:30	Georg Jander, Boyce Thompson Institute	Perennial Australian soybeans, a possible source of aphid resistance genes
1:30	2:00	John All, University of Georgia	Insect resistance component of the University of Georgia Soybean Improvement Program
2:00	2:30	Clint Allen, USDA-ARS	Biology and management of lepidopteran insects
2:30	3:00	Evan McCoy, University of Georgia	Hidden in plain sight: Untangling an unexpected pyramid of caterpillar resistance QTLs
<b>3:00</b>	<b>3:20</b>	<b>Coffee Break</b>	
3:20	3:50	Kevin Rice, USDA-ARS & University of Missouri	Brown marmorated stink bug management: Using behavioral ecology and effective insecticides
3:50	4:20	Nick Seiter, University of Illinois	Management of the invasive kudzu bug ( <i>Mecacopta cribraria</i> ) in soybeans
4:20	4:50	Alejandro Del Pozo, North Carolina State University	Establishing management tactics for the kudzu bug, an invasive soybean pest in the US
4:50	5:20	Sriyanka Lahiri, University of Georgia	Integrated pest management of <i>M. cribraria</i>
<b>5:20</b>	<b>6:30</b>	<b>Social Hour &amp; Poster Session, Foyer &amp; Versailles 2</b>	

## Wednesday Feb 14<sup>th</sup>, 2018 | Room: Versailles 1

**Continental Breakfast | 7:00 am - 8:00 am | Versailles Foyer**  
**Hosted by the Commercial Soybean Breeders**

Start	End	Speaker	Topic
8:00	8:15	Zenglu Li, Univ. of Georgia Luciano M. Jaureguy, Dow AgroSciences	Announcements Poster winner announcements
8:15	8:30	Michelle Graham, USDA-ARS	SoyGEC Report
8:30	8:50	David Grant, USDA-ARS	Soybean Genetics Committee report and SoyBase.org update
8:50	9:05	Zenglu Li, Univ. of Georgia	Germplasm Committee report
9:05	9:25	From the Floor	Recognitions, retirements, and announcements
9:25	9:40	Kelly Whiting United Soybean Board	USB Update
9:40	10:10	Keith Rincker, Bayer Crop Science	Fine mapping of resistance genes from brown stem rot resistance sources
10:10	10:25	Jeffery Boehm, University of Georgia	<i>maxPedigree</i> – A pedigree and trait visualization tool
10:25	10:55	Henry Nguyen, University of Missouri	Next-generation soybean genomics resources for trait discovery and molecular breeding
10:55	11:00	Zenglu Li, Univ. of Georgia	Adjourn

### Technicians Workshop

**Date and time:** 1:00 pm, Feb 12<sup>th</sup> - 12:00 pm, Feb 13<sup>th</sup>, 2018

**Organizer:** Troy Cary

**Room:** St. Moritz and Bern

### USB Composition Workshop

**Date and time:** 11:00 am, Feb 14<sup>th</sup> – 3:30 pm, Feb 15<sup>th</sup>, 2018

**Organizer:** Kelly Whiting

**Room:** St. Moritz and Bern, Sheraton Chalet Hotel

The 2018 United Soybean Board (USB) Composition Workshop highlights current research on soybean seed composition and quality traits and presentations on the value and delivery of soybean quality traits to the market. The Workshop will begin immediately *after* the 2018 Soybean Breeders Workshop.

## **Wed, Feb 14   Improvement of Soybean Oil Quality**

11:00 – 11:05am	Welcome and Introduction to Session – Kelly Whiting, USB staff
11:05 – noon	USB high oleic breeding project update – Kristin Bilyeu, USDA-ARS Columbia, MO
12:00 – 1:15pm	Lunch (on your own)
1:15 – 2:15pm	USB increased oil content project update – Leah McHale, Ohio State Univ.
2:15 – 2:40pm	Update on Plenish High Oleic and Development of Improved Protein Content for Upper Midwest Soybean - Steve Schnebly, DuPont Pioneer
2:40 – 3:10pm	High oleic/low saturate breeding in Michigan– Dechun Wang, Michigan State University
3:10 – 3:30pm	Development of high oleic soybean varieties at Schillinger Genetics – John Schillinger, Schillinger Genetics Inc.
3:30 – 4:00pm	Break
4:00 – 4:20pm	Prospect and Opportunities for Commercialization of Public High Oleic Varieties – Bryan Stobaugh, Missouri Soybean Merchandising Council
4:20 – 4:40pm	Improving beneficial fatty acid profile of soybean for human health – Khalid Meksem, Southern Illinois University
4:40 – 5:10pm	Overview of capturing value of soybean meal in the marketplace - Gordon Denny, Gordon Denny LLC
5:10 – 5:30pm	Soybean breeding for healthier oils with optimized ratios of omega-6 to omega-3 fatty acids – Jeong-Dong Lee, Kyungpook National Univ., Korea
5:30pm	Adjourn – Reminder of 7:30am start on Thursday, Feb 15

## **Thu, Feb 15   Improvement of Soybean Meal Quality**

7:30am – 7:35am	Welcome & Introduction to Session – Kelly Whiting, USB staff and Dennis Byron, USB consultant
7:35am – 8:35am	Project update - Development and discovery of germplasm and genes with improved protein and amino acid content utilizing cultivated and wild soybean sources – Rouf Mian, USDA-ARS, Raleigh, NC
8:35 – 9:35am	Project update - Development of germplasm and varieties with improved protein utilizing unique genetic diversity sources – George Graef, University of Nebraska

9:35 – 9:55am	Break
9:55 – 10:55am	Project update - Modifying carbohydrates in soybean for enhanced nutritional energy meal – Katy Rainy, Purdue University
10:55 – 11:30am	Breakout sessions – Finalize meal strategic plan, address gaps and needs for 2019 and future
11:30 - Noon	Group discussion to finalize meal strategic plan, address gaps and needs for 2019 and future of soybean meal improvement
Noon – 1:15pm	Lunch (on your own)

### **Special session from the World Soybean Research Conference and other topics**

1:15 – 2:00pm	Development of high oleic and soybean oil value traits at DuPont-Pioneer including effect of high oleic on soybean meal – Susan Knowlton, DuPont Pioneer
2:00 – 2:30pm	Low trans fat solid fat functionality: the role of interesterified high oleic soybean oil based shortenings – Tom Tiffany, ADM Oils, Quincy Illinois
2:30 – 3:00pm	Increasing soybean oil content by targeted silencing of a novel negative regulator of fatty acid synthesis - Jay Thelen, University of Missouri
3:00 – 3:05pm	Wrap-up – Kelly Whiting, USB staff
3:05 – 3:30pm	Break (refreshment) and informal discussion

### **Special Meetings**

<b>Date &amp; Time</b>	<b>Meeting</b>	<b>Contact person</b>	<b>Room</b>
------------------------	----------------	-----------------------	-------------

#### **Sat, Feb 10th**

1:00pm - 6:00pm	USB Project Meeting	Tommy Carter	St. Moritz
1:00pm - 6:00pm	USB Project Meeting	Larry Purcell	Bern

#### **Sun, Feb 11th**

8:00am - 12:00pm	USB Project Meeting	Tommy Carter	St. Moritz
8:00am - 6:00pm	USB Project Meeting	Larry Purcell	Bern

1:00pm - 6:00pm	USB HOLL Project Meeting	Kelly Whiting	St. Moritz
-----------------	--------------------------	---------------	------------

## Mon, Feb 12th

7:00am - 12:00pm	USB Project Meeting	Kelly Whiting	St. Moritz/Bern
8:30am - 10:00am	SoyBase Workshop Meeting	David Grant	Alpine II
8:30am - 10:00am	Soybean Germplasm Committee Meeting	Zenglu Li	Alpine I
10:00am - 12:00pm	Soybean Genomics Executive Committee	Michelle Graham	Zermatt
1:00pm - 5:00pm	Technicians Workshop	Troy Cary	St. Moritz/Bern
5:30pm - 6:30pm	Commercial Soybean Breeders' Business Meeting	Luciano Jaureguy	Alpine I
7:00pm - 8:00pm	Soybean Genetics Committee	David Grant	Davos

## Tue, Feb 13th

8:00am - 12:00pm	Technicians Workshop	Troy Cary	St. Moritz/Bern
12:30pm - 2:00pm	NCSRP GOYEN Project Meeting	Leah McHale	Alpine I
7:00pm - 8:00pm	Uniform Regional Testing - South	Anne Gillen	Alpine I
7:00pm - 7:30pm	Uniform Regional Testing -North	Gary L Nowling	Alpine II
7:30pm - 8:00pm	SCN Regional Testing	Brian Diers	Alpine II

## Wed, Feb 14th

7:00am - 8:00am	Public-Private Southern Breeders Meeting	Tommy Carter	Alpine II
11:00am - 6:00pm	USB Composition Workshop	Kelly Whiting	St. Moritz/Bern

## Thu, Feb 15th

8:00am - 12:00pm	USB Project Meeting	Kelly Whiting	Lugano
8:00am - 12:00pm	USB Project Meeting	Kelly Whiting	Zermatt
8:00am - 5:00pm	USB Composition Workshop	Kelly Whiting	St. Moritz/Bern

## Workshop Coordinators

**Zenglu Li**, Univ. of Georgia – Workshop Coordinator, overall planning and coordination

**David Walker**, USDA-ARS, Program Chair, Tuesday Session

**Kelly Whiting**, USB, Program Chair, USB Seed Composition Workshop

**Bo Zhang**, Virginia Tech, Special meetings and meeting room coordination

**David Grant**, USDA-ARS, Website support

### Executive Board of Commercial Soybean Breeders

**Keith Merrill**, Monsanto Company

**Kurt Carpenter**, DuPont Pioneer

**Luciano Jaureguy**, Dow AgroSciences

**Heinrich Wohleser**, Monsanto Company

**Clem Weidenbenner**, Harmony Agricultural Products