

# 13<sup>th</sup> Western Nutrient Management

## CONFERENCE

### PROGRAM

Reno, Nevada | March 7-8, 2019

Sponsored by



**WERA-103**

### 2019 Committee:

**Jim Ippolito**

*Chair, Colorado State University*

**Kevin Bronson**

USDA-ARS

**Grant Cardon**

Utah State University

**Robert Flynn**

New Mexico State University

**Bryan Hopkins**

Brigham Young University

**Rob Mikkelsen**

International Plant Nutrition Institute

**Robert Miller**

Colorado State University

**Amber Moore**

Oregon State University

**Jay Norton**

University of Wyoming

**Urszula Norton**

University of Wyoming

**Terry Tindall**

J.R. Simplot Company

**Cindy Smith**, *Conference Organizer*, International Plant Nutrition Institute

ONLINE PROCEEDINGS: [conference.ipni.net](http://conference.ipni.net)

# 13<sup>th</sup> Western Nutrient Management



## CONFERENCE

March 7- 8, 2019

### Thursday Morning Session

- 7:00 - 8:00     **Breakfast**
- 7:55 - 8:00     **Opening Remarks** - Jim Ippolito/Rob Mikkelsen
- 8:00 - 8:50     **Opening Keynote** - Patrick Brown, UC Davis  
Biostimulants: Their Function and Effective Use in Modern  
Agriculture (*Chair: Rob Mikkelsen, IPNI*)
- 9:00 - 11:00    **Breakout Sessions 1 and 2**

#### **BREAKOUT SESSION 1 - Biostimulants** (*Chair: Bryan Hopkins, BYU*)

1. Humic Products in Agriculture: Potential Benefits and Research Challenges  
**Dan Olk**, USDA-ARS, Ames, IA
2. Winning the Battle Against Environmental Stress by Better  
Understanding Biostimulant Responses, **David Holden**, Holden  
Research and Consulting
3. A Science-based Approach to Trialing Biostimulants and Interpreting  
Trial Data, **Rachel Hillmer**, Koch Biological Solutions
4. Overview of Biostimulants Efficacy, **Bryan Hopkins**, BYU; Provo, UT

#### **BREAKOUT SESSION 2 - Specialty Crops** (*Chair: Amber Moore, OSU*)

1. Adopting Quinoa for Eastern Idaho, **Xi Liang**, U of I
2. Nutrient Management for Optimum Fruit Quality in Apple Orchards  
with High Density Systems, **Clive Kaiser**, OSU
3. Nutrient Management in Asian Leafy Vegetables, **Aparna Gazula**, UC Davis
4. Evaluating and Revising Blueberry Tissue Nutrient Standard Guidelines,  
**Joan Davenport**, WSU

11:00 - 11:30    **Break / View Posters**

11:30 - 12:00    **Flash and Dash** (*Grant Cardon for F&D and Poster Session*)

- Fast-paced, bottom line, 2 slides max student poster presentations.
- An elevator pitch: Explanation of what was done, how it was accomplished, and why it is important (90 – 120 seconds per person, depending on number of presenters)

## Thursday Afternoon Session

- 12:00 - 1:00    **Lunch/Awards**
- 1:00 - 2:15    **Poster Session**
- 2:15 - 2:30    **Break**
- 2:30 - 4:30    **Breakout Sessions 3 and 4**

### **BREAKOUT SESSION 3 - pH, Liming, and Salinity Management**

*(Chair: Bob Miller, CSU)*

1. pH Fundamentals, **Clain Jones**, MSU
2. Lime Management, **Haiying Tao**, WSU
3. Soil Salinity, **Bob Flynn**, NMSU
4. Soil Sodicity, **Jim Walworth**, UA

### **BREAKOUT SESSION 4 - Resilient Ag Systems** *(Chair: Jay Norton, UW;*

*Kevin Bronson, USDA-ARS, Maricopa, AZ)*

1. Managing Soils for CO<sub>2</sub> Drawdown: Boon or Boondoggle?  
**Keith Paustian**, CSU
2. Use of Biological Soil Tests to Assess Soil Health and Productivity,  
**Will Horwath**, UC Davis
3. Pacific Island Agroforestry, **Jonathan Deenik**, UH
4. Wastewater Reuse in the Arid West: Increased Water Supplies and New Paradigms for Nutrient Management, **Clinton F. Williams**, USDA-ARS, Maricopa, AZ

- 4:45 – 6:00    **Poster Session**, Poster Awards, and Mixer (with Cash Bar)

## Biennial Support Team



**IPNI**  
INTERNATIONAL  
**PLANT NUTRITION**  
INSTITUTE



**WERA-103**

## Friday Morning Session

7:00 - 8:00     **Breakfast**

8:00 - 11:00    **Breakout Sessions 5 and 6**

### **BREAKOUT SESSION 5 - Rhizosphere** (*Urszula Norton, UW*)

1. Biological and Chemical Drivers of Nutrient Dynamics in the Rhizosphere: Applications for Crop Management, **Nicole E. Tautges**, UC Davis
2. Paying Attention to Root Traits for the Effective Use of Water and Nutrients, **Felipe Barrios Masias**, UNR
3. Rhizosphere Processes Impact Potassium Nutrition, **Scott Murrell**, IPNI

9:30 - 10:00    **Break**

4. Utilizing the 4Rs to Mitigate Ammonia Toxicity in Roots, **Isaac Madsen**, WSU
5. Belowground Ecological Interactions for Improved Plant Health, Nutrition and Environmental Quality in Agricultural Production, **Cristina Lazcano**, Cal Poly

### **BREAKOUT SESSION 6 - Managing Nutrients and Water/Fertigation**

*(Terry Tindall, J.R. Simplot, Bob Flynn, NMSU)*

1. Improving Nutrient Use Efficiency in Irrigated Areas of Western Agriculture **Alan Blaylock**, Nutrien
2. Use and Timing of Bio-stimulants in Combination with Fluid Fertilizers to Improve Nutrient Use Efficiency of Irrigated Vegetables in SW Desert of AZ, **Charles Sanchez**, U of A
3. Nutrient Management and Improved Efficiency of Drip Irrigated Processing Potatoes, **Galen Mooso**, J.R. Simplot Co.

9:30 - 10:00    **Break**

4. Irrigated Cereal Response to Nitrogen Applications to Improve Efficiencies For Yield and Protein, **Christopher Rogers**, U of I
5. Phosphorus Efficiencies of Liquid P Fertilizers as Evidenced by P Adsorption Isotherms of Western Calcareous Soils, **Jared Williams**, BYU - Idaho

11:00 - 11:10   **Break**

11:10 - 12:00   **Closing Keynote** - David Tarkalson, USDA-ARS  
Approaches to Nutrient Recommendations  
*(Chair: Jim Ippolito, CSU)*

12 Noon        **End of Conference**