

**2018 PAA Annual Meeting
DELEGATE PROGRAM**

SUNDAY, July 22, 2018

Location

9:00 a.m. – 12:00 p.m.	Finance & Endowment Committee Meeting	Boise Centre (430 A)
10:30 a.m. – 4:00 p.m.	Graduate Student Activity - Escape Room	
1:00 p.m. – 6:00 p.m.	Registration Desk/Information	Boise Centre (440)
1:00 p.m. – 5:00 p.m.	Executive Committee Meeting	Boise Centre (430 A)
1:00 p.m. – 6:00 p.m.	Poster Set-up	Boise Centre (400 A)
6:00 p.m. – 8:00 p.m.	President's Reception	JUMP Deck

MONDAY, July 23, 2018

6:30 a.m. – 8:00 a.m.	BREAKFAST	Boise Centre (400 B, C)
6:30 a.m. – 8:00 a.m.	Editorial Board Breakfast	Boise Centre (430 B)
6:30 a.m. – 8:00 a.m.	Physiology Section Breakfast	Boise Centre (430 A)

The Role of Pre- and Postharvest Practices to Minimize Bruising in Potato

(1) Sastry S. Jayanty*
Physiology Section Invited Speaker

8:00 a.m. – 5:00 p.m.	Registration Desk/Information	Boise Centre (440)
8:00 a.m. – 7:00 p.m.	Graduate Students Awards Committee	Boise Centre (430 B)
8:00 a.m. – 7:00 p.m.	Presenter Practice Room	Boise Centre (430 A)
8:00 a.m. – 4:00 p.m.	Accompanying Person Tour to Payette Lake and McCall	
8:00 a.m. – 9:30 a.m.	Breeding & Genetics Section Meeting	Boise Centre (410 A)
8:00 a.m. – 9:30 a.m.	Utilization & Marketing Section Meeting	Boise Centre (410 B)
8:00 a.m. – 9:30 a.m.	Plant Protection Section Meeting	Boise Centre (410 C)
9:30 a.m. – 10:00 a.m.	BREAK – Coffee/Snacks	Boise Centre (400 A)

10:00 a.m. – 11:30 a.m.

**CONCURRENT SESSION I
Industry-Oriented Session**

Boise Centre (410 C)

Moderator: **TBA**

10:00 a.m. **Nitrogen Response and Soil Microbial Activity in Potato Cropping Systems as Affected by Fumigation**

(2) Carl Rosen*, James Crants, Linda Kinkel, Andy Robinson, Neil C. Gudmestad

10:15 a.m. **Nitrogen Rate Effects on Yield and Fry Processing Quality of Caribou Russet**

(3) Gregory A. Porter*, Paul C. Ocaya

10:30 a.m. **Response of Russet Potato to Compost Application Rate with Optimum or Reduced Nitrogen Fertilizer Application**

(4) Samuel Y. Essah*, David G. Holm

10:45 a.m. **Increasing Productivity in Potato Production Systems by Increasing Cropping Systems Diversity**

(5) Chris Long, Lisa Tiemann, Noah Rosenzweig, Erin Hill, Marisol Quintanilla, Monica Jean, Katrina A. Zavislan*

11:00 a.m. **Role of ‘*Candidatus Liberibacter solanacearum*’ and Potato Psyllid in ZC Incidence, Severity, and Seed Transmission**

(6) Kylie D. Swisher Grimm*, Tariq Mustafa, Rodney Cooper, Joseph Munyaneza

11:15 a.m. **Spread and Movement of *Dickeya* in Field Grown Potato Tubers**

(7) Blake W. Greiner*, Viviana V. Rivera-Varas, Gary A. Secor
Frank L. Haynes Graduate Student Research Award Competition

10:00 a.m. – 11:30 p.m.

**CONCURRENT SESSION II
Breeding and Genetics I**

Boise Centre (410 A)

Moderator: **TBA**

10:00 a.m. **Under-estimation of Genetic Diversity within Wild Potato (*Solanum*) Species Populations**

(8) John Bamberg*, Alfonso del Rio, Laura Shannon

10:15 a.m. **Genetic Covariance of Environments in the National Chip Processing Trial**

(9) Cari A. Schmitz Carley*, Jeffrey B. Endelman

10:30 a.m. **Understanding the Performance of New Potato Varieties in Wisconsin**

(10) Felix Navarro*

10:45 a.m. **The NU-Efficiency: First Steps in Breeding Nitrogen Use Efficient Red FM Varieties**

(11) Colin R. Jones*, Laura Shannon, Carl Rosen, Thomas Michaels
Frank L. Haynes Graduate Student Research Award Competition

6:00 p.m. – 8:00 p.m.	Pedals and Pints Bike Tour	
6:00 p.m. – 8:30 p.m.	PAA Past President and Honorary Life Member Dinner (<i>PAA Past Presidents and HLMS only</i>)	Grove Hotel
6:30 p.m. –	Boise Hawks Baseball Game	

TUESDAY, July 24, 2018

6:30 a.m. – 8:30 a.m.	BREAKFAST	Boise Centre (400 B, C)
6:30 a.m. – 8:00 a.m.	Extension, Production & Mgt. Section Breakfast	Boise Centre (430 A)
6:30 a.m. – 8:00 a.m.	Potato Crop Germplasm Committee Meeting	Boise Centre (430 B)
8:00 a.m. – 5:00 p.m.	Registration Desk/Information	Boise Centre (440)
8:00 a.m. – 7:00 p.m.	Graduate Student Awards Committee and Presenter Practice Room	Boise Centre (430 B)
8:30 a.m. – 12:00 p.m.	Executive Committee Meeting	Boise Centre (430 A)
8:30 a.m. – 12:00 p.m.	CONCURRENT SESSION I Extension, Production & Management I	Boise Centre (410 A)

Moderator: **TBA**

8:30 a.m. (21)	Defining Cultural Management of Mountain Gem Russet Relative to Russet Burbank Alejandro D. Cruz*, Zach Holden, Mark J. Pavék <i>Frank L. Haynes Graduate Student Research Award Competition</i>
8:45 a.m. (22)	Combining Remote Sensing and the Nitrogen Nutrition Index for Potato in the Upper Midwest Brian J. Bohman*, Carl Rosen, David Mulla <i>Frank L. Haynes Graduate Student Research Award Competition</i>
9:00 a.m. (23)	Use of Pyroxasulfone in Potato Production Andy Robinson*
9:15 a.m. (24)	Soil Microbiome Characteristics and Soilborne Disease Development Associated with Long-term Potato Cropping System Practices Robert P. Larkin*
9:30 a.m. (25)	Effects of Irrigation Methods and Nitrogen Fertilizer Strategies on Florida Potato Production Andre Luiz Biscaia*, Lincoln Zotarelli, Michael D. Dukes, Senthold Asseng, Shinsuke Agehara
9:45 a.m. (26)	Conserving Water through the Community-led Wisconsin Water Stewards Program Jed Colquhoun*, Robert Smail, Deana Knuteson

10:00 a.m. BREAK – Coffee/Snacks Boise Centre (400 A)

10:30 a.m. **Responses of New Potato Cultivars to Deficit Irrigation in a Greenhouse Setting**
(27) Yi Wang*, Mack Naber

10:45 a.m. **Variability of Potato Varieties under Agroecological Conditions in Western Serbia**
(28) Dobrivoj Postic, Addie Waxman*, Zoran Brocic, Natasa Veljevic, Ratibor Strbanovic, Rade Stanisavljevic

11:00 a.m. **Simulated Drift of Dicamba and/or Glyphosate to the Chipping Cultivar Atlantic**
(29) Harlene M. Hatterman-Valenti*, Collin Auwarter

11:15 a.m. **Field and Storage Performance of *Acclimate* Variety Potatoes**
(30) Jeremy W. Singer*, Wes Rodgers, Tom Ireland, Jolyn Rasmussen

11:30 a.m. **Skin Set, Yield and Quality of Dakota Ruby Potatoes Influenced by Nitrogen Fertilizer Rate**
(31) Upasana Ghosh*, Asunta Thompson

11:45 a.m. **Cultivar Susceptibility to Leak Associated with Shatter Bruise and Force Required to Break the Periderm**
(32) Andrew K. Hollingshead*, Nora Olsen, Michael Thornton, Jeff S. Miller
Frank L. Haynes Graduate Student Research Award Competition

8:30 a.m. – 12:00 p.m. **CONCURRENT SESSION II**
Breeding & Genetics II Boise Centre (410 B)

Moderator: **TBA**

8:30 a.m. **The Development of Good Performing Diploid Homozygous Potato Inbred Line for Breeding and Research**
(33) Pim Lindhout*, Marcela Viquez, Ying Su, Michiel de Vries, Sjaak van Heusden, Menno ter Maat

8:45 a.m. **Dihaploid Potato Breeding at Michigan State University**
(34) Chen Zhang*, Kate M. Shaw, Maher A. Alsahlany, Norma C. Manrique-Carpintero, Andrea Garcia-Ramirez, Daniel Zarka, Joseph Coombs, David Douches

9:00 a.m. **Comparing Methods of Ploidy Estimation in Potato**
(35) Lydia Kramer*, John Bamberg

9:15 a.m. **Testing an Efficient Method for Dihaploid Potato Germplasm Development**
(36) James S. Busse*, Paul C. Bethke, Shelley H. Jansky

9:30 a.m. **Inbreeding Red Norland: Stabilizing a Genetic Background for Tuber Shape, Skin Color and Tuber Finish**
(37) James S. Busse*, Paul C. Bethke, Shelley H. Jansky

- 9:45 a.m. (38) **Genetic Evidence of a Recessive Lethal Allele on Potato Chromosome 12**
Jeffrey Endelman*, Shelley Jansky, Nathan Butler, Grace Christensen
- 10:00 a.m. BREAK – Coffee/Snacks
- 10:30 a.m. (39) **Developing Self-compatible Diploid Potato Germplasm Pool through Recurrent Selection**
Maher A. Alsahlany*, Daniel Zarka, Joseph Coombs, David Douches
Frank L. Haynes Graduate Student Research Award Competition
- 10:45 a.m. (40) **Overcoming Self-incompatibility in Diploid Potato Using Genome Editing**
Felix E. Enciso*, Daniel Zarka, Satya S. Nadakuduti, Robin Buell, David Douches
Frank L. Haynes Graduate Student Research Award Competition
- 11:00 a.m. (41) **Identifying Colorado Potato Beetle Resistance Mechanisms in Diploid Potato**
Natalie R. Kirkwyland*, David Douches, Joseph Coombs, Robin Buell, Grant Billings, Norma Manrique, Christina Difonzo
Frank L. Haynes Graduate Student Research Award Competition
- 11:15 a.m. (42) **Mapping and QTL Analysis of Complex Traits Using Dihaploid Populations of Potato**
Norma C. Manrique-Carpintero*, Joseph Coombs, Gina Pham, Richard E. Veilleux, Robin Buell, David Douches
- 11:30 a.m. (43) **DMRH S5-28-5: A Homozygous Diploid Self-Compatible Potato Clone Conducive for Genetics Research**
Satya S. Nadakuduti, Colby Starker, DaeKwan Ko, Richard E. Veilleux, Daniel F. Voytas, Robin Buell, David Douches*
- 11:45 a.m. (44) **Genetic Markers for Potato Mop Top and Tobacco Rattle Virus (PMTV and TRV) Resistance in a Tetraploid Russet Mapping Population**
Joseph Coombs*, David Douches, S.K.R. Yellareddygari, Neil C. Gudmestad, Richard Novy, Jonathan Whitworth
- 8:30 a.m. – 12:00 p.m. **CONCURRENT SESSION III**
Potato Cyst Nematode Mini Symposium Boise Centre (410 C)
- 8:30 a.m. (45) **Status of *Globodera pallida* in Idaho—Research Outlooks**
Louise-Marie Dandurand*
- 8:45 a.m. (46) **Early Defense Response of *Solanum sisymbriifolium* to *Globodera pallida* Infection**
Rinu Kooliyottil*, Louise-Marie Dandurand, Joseph Kuhl, Allan Caplan, Fangming Xiao
- 9:00 a.m. (47) **Evaluation of Fluorescent Dyes/probes for Assessing Potato Cyst Nematode Viability and Its Application in Flow Cytometric Sorting of Nematode Life Stages**
Syamkumar Sivasankara Pillai*, Louise-Marie Dandurand

- 9:15 a.m. **Characterization of the Glutathione S-Transferase (GST) and Superoxide Dismutase (SOD) from the Potato Cyst Nematode *Globodera pallida***
 (48) Nejra Solo*, Louise-Marie Dandurand
Frank L. Haynes Graduate Student Research Award Competition
- 9:30 a.m. **Identification of Molecular Strategies to Combat Pale Cyst Nematode in Potato**
 (49) Rachel M. Gross*, Allan Caplan, Joseph Kuhl, Louise-Marie Dandurand, Fangming Xiao
Frank L. Haynes Graduate Student Research Award Competition
- 9:45 a.m. **The Role of Gene Enrichment in Mapping the H2 Nematode Resistance Gene in Tetraploid Potato**
 (50) Shona M. Strachan*, Katie Baker, Joanne Tze-Yin Lim, Glenn Bryan, Vivian Blok, Ingo Hein
Frank L. Haynes Graduate Student Research Award Competition
- 10:00 a.m. BREAK – Coffee/Snacks
- 10:30 a.m. **Functional Analysis of 1106 Effector Gene in the Potato Cyst Nematode *Globodera pallida* Using RNA Interference**
 (51) Aida M. Duarte*, Louise-Marie Dandurand
- 10:45 a.m. **Exploration of Wild Potato Species for Novel Resistance against the Potato Cyst Nematode *Globodera rostochiensis***
 (52) Huijun Yang*, David Thurston, Walter De Jong, Xiaohong Wang
- 11:00 a.m. **Use of Molecular Markers for Breeding PCN Resistance in the Russet Market Class**
 (53) Joseph C. Kuhl*, Louise-Marie Dandurand, Richard Novy, Jonathan Whitworth, Inga Zasada, Walter De Jong, Xiaohong Wang
- 11:15 a.m. **Introgression of *Globodera* Resistance into the Russet Market Class**
 (54) Richard Novy*, Jonathan Whitworth, Joseph Kuhl, Louise-Marie Dandurand, Inga Zasada, Walter De Jong, Xiaohong Wang
- 11:30 a.m. **Herbicide Management in Litchi Tomato - A Trap Crop for Pale Cyst Nematode**
 (55) Pamela J.S. Hutchinson*, Brent R. Beutler
- 12:00 p.m. – 1:00 p.m. LUNCH Boise Centre (400 B, C)
- 1:00 p.m. – 3:00 p.m. **CONCURRENT SESSION I**
Physiology – Utilization and Marketing Boise Centre (410 A)
- Moderator: TBA
- Physiology*
- 1:00 p.m. **Increasing the Production Efficiency of Potato with Plant Growth Retardants**
 (56) Graham D. Ellis*, Lisa O. Knowles, N. Richard Knowles
Frank L. Haynes Graduate Student Research Award Competition

- 1:15 a.m. **Sensitivity of Potato Meristems to the Sprout Inhibitor 1,4-dimethylnaphthalene is Dependent on Dormancy Status**
(57) Michael A. Campbell*, Abrar Aljahani, Maria Pirritano
- 1:30 p.m. **Regulation of HMG CoA Reductase and its Functional Coupling to FPS in Potato (*Solanum tuberosum*)**
(58) Moehninsi *, Duroy A. Navarre
- 1:45 p.m. **Application of Ground Penetrating Radar for Potato Breeding and Production**
(59) Dirk B. Hays*
- 2:00 p.m. **Impact of 2,4-D on In-Season And Stored Red Norland Skin Color**
(60) James S. Busse*, Paul C. Bethke
- 2:15 p.m. **Analysis of Physiological Traits and Their Relevance to Bruising Susceptibility of Potato**
(61) Sen Lin*, Duroy A. Navarre

Utilization and Marketing

Boise Centre (410 A)

- 2:30 p.m. **Characteristics of Starch in Potato Varieties Processing for Premium French Fries**
(62) Yijing Shao, Sadeghi Rohollah, Yu-Lian Lin, Michael Thornton, Amy Lin*
- 2:45 p.m. **Utilization of Industrial Potato Peel Waste from Major Processing Cultivars on Modulating the Glycemic Response**
(63) Chen Chen*, Steve McGeehan, Michael Thornton, Amy Lin

1:00 p.m. – 3:00 p.m.

**CONCURRENT SESSION II
Plant Protection I**

Boise Centre (410 C)

Moderator: **TBA**

- 1:00 p.m. **Can We Predict Potato Yield Loss Due to Metribuzin Sensitivity in North Dakota?**
(64) Razi Ibrahim, Harlene M. Hatterman-Valenti*, John Stenger, Asunta Thompson
- 1:15 p.m. **Tolerance of Processor and Specialty Potato Varieties to Ethalfluralin**
(65) George Newberry*, Pamela J.S. Hutchinson, Brent R. Beutler
- 1:30 p.m. **Characterization of Aggressiveness and Pathogenicity of *Streptomyces* spp. Causing Potato Common Scab in Michigan**
(66) Saltanat Mambetova*, Katlin Blaine, Noah Rosenzweig, Ray Hammerschmidt
Frank L. Haynes Graduate Student Research Award Competition
- 1:45 p.m. **Mild Cross-protection Can Be Induced in Potato by Co-inoculation of *Verticillium dahliae* Strains**
(67) David L. Wheeler*, Dennis A. Johnson
Frank L. Haynes Graduate Student Research Award Competition

- 2:00 p.m.
(68) **Prevalence of *Potato Virus Y* Strains in Idaho Seed Potato, 2013 to 2017**
Lisa T. Tran*, Cassandra N. Funke, Olga V. Nikolaeva, Kelsie J. Green, Mohamad Chikh Ali, Alexander V. Karasev
Frank L. Haynes Graduate Student Research Award Competition
- 2:15 p.m.
(69) **Rapid On-site Detection and Characterization of *Phytophthora infestans***
Sandesh Dangi*, James W. Woodhall, Katie L. Fairchild, Alexandra Oropeza, David Douches, Phillip S. Wharton
Frank L. Haynes Graduate Student Research Award Competition
- 2:30 p.m.
(70) **Mapping Potato Psyllid Populations in Potato in the Columbia Basin from 2013 – 2017**
Isabel Cueva*, Kylie D. Swisher Grimm, Carrie H. Wohleb, David Horton, Rodney Cooper, Joseph Munyaneza
- 2:45 p.m.
(71) **Haplotyping of *Cand. Liberibacter solanacearum*, Causal agent of Zebra Chip Disease, in Potato Tubers Collected During 2012 to 2016 Potato Growing Seasons in Southern Idaho**
Jennifer Dahan*, Brandon D. Thompson, Sahar Eid, Erik J. Wenninger, Nora Olsen, Alexander V. Karasev

3:00 p.m. – 5:30 p.m.

POSTER SESSION (authors present)

Boise Centre (400 A)

Breeding & Genetics

- (72) **USAID Feed the Future Biotechnology Potato Partnership: 2018 Update**
David Douches*, Kelly Zarka, Karen Hokanson, Marc Ghislain, Phillip S. Wharton, John Medendorp, Craig M. Richael, Nicolas Champouret
- (73) **Genomic Selection for Late Blight and Common Scab Resistance in Cultivated Potato (*Solanum tuberosum*)**
Felix E. Enciso*, David Douches, Marco A. Lopez-Cruz, Joseph Coombs, Gustavo de Los Campos
- (74) **Gene Editing with TALEN in Tetraploid Potato**
Adrienne Forsyth*, Hui Duan, Joshua Sutherland, Nic Nottingham, Craig M. Richael, Hua Yan
- (75) **Generating a Population of Selfed Clones from the Diploid Hybrid *Solanum phureja-S. stenotomum* Population**
Kathleen G. Haynes*
- (76) **Germplasm Release: True Potato Seed from a Late Blight and Early Blight Resistant Diploid *S. phureja-S. stenotomum* Population**
Kathleen G. Haynes*, Xinshun Qu
- (77) **Heat Tolerance in Diploid Wild Potato Species**
Marcio L. Guedes, Kathleen G. Haynes*, Bryan T. Vinyard, Cesar A.B.P. Pinto
- (78) **Resistance to Soft Rot Bacteria in Diploid *S. phureja-S. stenotomum* Potatoes**
Nayara Marangoni, Jianjun Hao, Kathleen G. Haynes*

- (79) **Three Cycles of Recurrent Maternal Half-sib Selection Reduces Foliar Late Blight in a Diploid Population**
Kathleen G. Haynes*, Xinshun Qu
- (80) **Examining Genetic Features Underlying Self-compatibility Donated by *S.chacoense***
Natalie R. Kirkwyland*, David Douches, Robin Buell, Grant Billings
- (81) **Examination of Spontaneous Occurrence of Tetraploids in $2x \times 2x$ *S. tuberosum* Dihaploids by Self-compatible Donors**
Susan A. Otieno*, Norma Manrique, Maher A. Alsahlany, Joseph Coombs, David Douches
- (82) **Screening and Identification of Key Alleles for *Ralstonia solanacearum* Resistance in Two Wild Cultivars Cross**
Susan A. Otieno*, Caitilyn Allen, David Douches
- (83) **Identifying Late Blight Resistance QTL in a Diploid Mapping Population of *Solanum microdontum***
Emily W. Pawa, Norma C. Manrique-Carpintero, Saltanat Mambetova, Ray Hammerschmidt, Kathleen M. Shaw*, David Douches
- (84) **Identification of Tolerance/Resistance to the Zebra Chip Disease in Diploid and Tetraploid Potato Clones**
Samuel J. Vigue*, Cecilia Tamborindeguy, Douglas C. Scheuring, Angel Chappell, Jeffrey W. Koym, J. Creighton Miller Jr., M. Isabel Vales

Extension Production & Management

- (85) **Efficacy of Combined Crop Oil and Insecticide Applications on In-season Movement of PVY in Southeast Idaho**
Melissa C. Bertram*, Melinda A. Lent, Arash Rashed, Kasia M. Duellman
- (86) **2017 Manitoba Potato Crop: Disease and Insect Update and Use of Phosphorus Acid Fungicides**
Vikram Bisht*
- (87) **Evaluation of Dakota Russet Seed Spacing for Early Harvest Processing**
Travis Chase*, Michael Thornton
- (88) **Optimizing CIPC Application in Box Potato Stores in the United Kingdom**
Adrian Briddon, Steve Saunders, Mike Storey, Adrian Cunningham*
- (89) **Importance of Potato Volunteers as PVY Reservoirs in Idaho, 2018**
Kasia M. Duellman*, Juliet M. Marshall
- (90) **Skin Set, Yield, and Quality of Dakota Ruby Potatoes Influenced by Vine Kill Practices**
Upasana Ghosh*, Asunta Thompson

(91) **Characterizing the Species of *Fusarium* Responsible for Potato Dry Rot in the Pacific Northwest**
Melinda A. Lent*, Melissa C. Bertram, Jill C. Randall, Phillip S. Wharton, Kasia M. Duellman

(92) **Potato Sustainability Initiative: Continuous Improvement in Sustainable Potato Production**
Nora Olsen*, Eric Ritchie, Thomas A. Green, Ida Yu

Physiology

(93) **Storability of Two University of Wisconsin Long Storage Potato Chipping Clones**
Amber M. Gotch*, Troy D. Fishler, Felix Navarro

(94) **Initial Studies on Understanding and Manipulating Resistance to Early Blight**
Richard W. Jones*

(95) **Wounding Induces Changes in Nitric Oxide-related Biologies Putatively Modulating Tuber Healing**
Ed C. Lulai*

(96) **Testing Resistance Strategies for Potato Zebra Chip and Citrus Huanglongbing Diseases**
Kent F. McCue*, James Thomson, Ethan Gardner, Kylie Swisher Grimm

(97) **Nitrogen Fertilization Effect on Potato Leaf Chemicals: An Alternative Control Method of Colorado Potato Beetle**
Guoqi Wen*, Athyna N. Cambouris, Mohamed Khelifi, Noura Ziadi, Annick Bertrand

(98) **Evaluation of New Temporary Immersion Bioreactor System for Micropropagation of Potatoes**
Dmytro P. Yevtushenko*

Plant Protection

(99) **Spore Traps: On-farm Tool for Early Warning of Potato Late Blight**
Eugenia Banks*

(100) **Developing Genetic and Chemical Control Solutions for Common Scab Disease**
Christopher Clarke*

(101) **Spatial Analysis Applied to Plant-parasitic Nematodes: The Case of *Globodera pallida* in Idaho**
Jn B. Contina*, Louise-Marie Dandurand, Guy R. Knudsen

(102) **Zebra Chip Symptom Severity Assessment and Evaluation of Spectral Signatures to Detect '*Candidatus Liberibacter solanacearum*' Infection**
Zhiguo Zhao, Sean Prager, Regina Karin Cruzado*, Xi Liang, Rodney Cooper, Gongshe Hu, Arash Rashed

(103) **Soil Microbial Community Differences across Potato Growing Regions**
Jed Grow*, Trevor Smart, Brad Geary, Noah Rosenzweig, Brenda Schroeder, Jeff S. Miller, Andy Robinson, Neil C. Gudmestad, Ken Frost, Dennis A. Johnson

- (104) **Characterization of Host-effector Transcription Dynamics during Late Blight Infection**
Paul Moresco*, Aaron Rowland, Hui Duan, Danielle Holt, Nicolas Champouret
- (105) **Microbial Community Response to Fumigation in Potato Soils**
Trevor Smart*, Brad Geary, Noah Rosenzweig, Brenda Schroeder, Jeff S. Miller, Andy Robinson, Neil C. Gudmestad, Dennis A. Johnson
- (106) **Colorado Potato Beetle Research Update from the Columbia Basin**
Silvia I. Rondon, Daniel I. Thompson*, Pahoua Yang
- (107) **Phenology of the Potato Psyllid and “*Candidatus Liberibacter solanacearum*” in Idaho on Bittersweet Nightshade**
Erik J. Wenninger*, Jennifer Dahan, Michael Thornton, Alexander V. Karasev
- (108) **Symptom Expression of *Potato Virus Y* across All Market Classes of U.S. Potato Varieties**
Jonathan Whitworth*, Stewart Gray
- (109) **A Spore Sampling Network for Early Detection of Foliar Potato Diseases in Idaho**
James W. Woodhall*, Alexandra Oropeza, Katie L. Fairchild, Alan Malek, Kasia M. Duellman, Phillip S. Wharton

6:00 pm - 9:00 pm Basque Block Party Dinner and Live Auction Boise Downtown

WEDNESDAY, July 25, 2018

- 6:30 a.m. – 8:30 a.m. BREAKFAST Boise Centre (400 B, C)
- 8:00 a.m. – 12:00 p.m. Graduate Student Awards Committee Meeting Boise Centre (430 B)
- 8:00 a.m. – 5:00 p.m. Registration Desk/Information Boise Centre (440)
- 8:30 a.m. – 12:00 p.m. **CONCURRENT SESSION I**
Breeding & Genetics III and
Extension, Production & Management II Boise Centre (410 A)

Moderator: **TBA**

Breeding & Genetics III

- 8:30 a.m. **Genetic Mapping of Colorado Potato Beetle Resistance-related Metabolites in Potato**
(110) Jamuna R. Paudel, Leslie Campbell, Jun Song, Katheryn Douglass, Kyle Gardner, Benoit Bizimungu, Agnes Murphy, Helen H. Tai*
- 8:45 a.m. **Molecular Determinants of *P. infestans* Recognition and Defense Elicitation in Potato**
(111) Dennis Halterman*

- 9:00 a.m. **Marker-assisted Selection for the Late Blight Resistance Gene R8**
(112) Grace Christensen*, Yu Chen, Dennis Halterman, Amanda Gevens, Jeffrey Endelman
- 9:15 a.m. **Staking Potato *Rpi*-genes: Accelerating Genetic Improvement of Conventional Varieties for Late Blight Resistance**
(113) Nicolas Champouret*
- 9:30 a.m. **Understanding the Host Resistance Mechanism to *Meloidogyne chitwoodi* in Potato Using Differential Gene Expression Analysis**
(114) Sapinder Bali, Kelly Vining, Cynthia Gleason, Chuck Brown, Vidyasagar Sathuvalli*
- 9:45 a.m. **Breeding for Resistance to Columbia Root Knot Nematode in Potato**
(115) Vidyasagar Sathuvalli*, Sapinder Bali, Kelly Vining, Ryan Graebner, Chuck Brown
- 10:00 a.m. BREAK – Coffee/Snacks

Extension, Production & Management II

Boise Centre (410 A)

- 10:30 a.m. **Effect of Plant Growth Hormones on Potato Tuber Uniformity**
(116) Mitch J. Bauske*, Andy Robinson
- 10:45 a.m. **Gene Expression Biomarkers for Prediction of Tuber Yield, Specific Gravity and Total N Uptake in Potato**
(117) Helen H. Tai*, Bernie Zebarth, Athyna Cambouris, Alison Nelson, Judith Nyiraneza, Jose Hector Galvez, Martin Lague, Martina V. Stromvik
- 11:00 a.m. **"Plant Nutrition Diagnostics: Potato" An Introduction**
(118) Galen Mooso*, Terry Tindall, Dharma Pitchay
- 11:15 a.m. **Accounting the Climate Variability on Nitrogen Fertilizer Strategies for Potatoes Using a Potato Crop Model**
(119) Andre Luiz Biscaia*, Senthold Asseng, Lincoln Zotarelli, Shinsuke Agehara, Michael D. Dukes
- 11:30 a.m. **The Sprout/seed-potato Technology: Establishing as an Example of Resource Usage and Alternative Income to Citrus Nurseries, in Brazil**
(120) José Alberto C. Souza-Dias*, Osmar Trevisan-Junior, Claudio Roberto F. Fernandes, Tainã F. Oliveira-Preto, Luis Henrique Trevisan
- 11:45 a.m. **'Small' Potato Productivity and Economics of Contrasting Cultivars: Irrigation, Seed Spacing, and Top-kill Timing Effects**
(121) Jazeem M. Wahab*, Benoit Bizimungu, Edmund K. Mupondwa, Greg Larson
- 12:00 p.m. Concurrent Session I Adjourns

8:30 a.m. – 11:30 a.m.

CONCURRENT SESSION II
Plant Protection II

Boise Centre (410 C)

Moderator: **TBA**

8:30 a.m. **Spore Trapping in Agricultural Settings – An Overview**

(122) Christian Lebeau-Jacob*

8:45 a.m. **Comparison of Broadcast and In-Row Fumigation with Metam Sodium for Verticillium Wilt Control**

(123) Shane M. Hansen*, Trent W. Taysom, Cheryn Clayton, Donald S. Anderson, Jeff S. Miller

9:00 a.m. **Development of a Standardized Greenhouse Assay to Visualize and Score the Potato Tuber**

(124) **Necrotic Ringspot Disease Caused by Recombinants of *Potato Virus Y* in Potato Cultivar Yukon Gold**
Mohamad Chikh Ali*, Alexander V. Karasev

9:15 a.m. **Low Genetic Diversity of Recombinants of *Potato Virus Y* in the United States Potato: A Natural Advantage for the Potato Producers**

(125) Alexander V. Karasev*, Kelsie J. Green, Mohamad Chikh Ali

9:30 a.m. ***Potato Virus Y* Survey and the Role of Potato cv. Agata in Virus Spread in Brazil**

(126) Mirelly C. Alves, Suellen B. Galvino-Costa, Antonia R. Figueira

9:45 a.m. **Introducing Multi-gene Late Blight Resistance, PVY Resistance and Quality Traits into Potato in One Step**

(127) Craig M. Richael*, Hua Yan, Troy Weeks, Nikolaos Georgelis, Nicolas Champouret

10:00 a.m. BREAK – Coffee/Snacks

10:30 a.m. **Effects of *Verticillium dahliae* on Photosynthetic Performance and Water Use Efficiency of Potato**

(128) Keshav Dahal*, Alexa Creelman, Charlotte Davidson, Helen H. Tai

10:45 a.m. **Passive Air Sampling and DNA Analysis (qPCR) for *Phytophthora infestans* – An Early Alert System for Late Blight in Potato**

(129) Kristine White*, Mike Saleh

11:00 a.m. **Characterization of *Phytophthora infestans* Isolates from Bangladesh**

(130) Sandesh Dangi, Most M. Begum, David Douches, Phillip S. Wharton*

11:15 a.m. **Salicylic Acid in Potato Foliage Influenced by Late Blight and Fungicides**

(131) Hector Lozoya-Saldaña*, Hugo Colín-Marín

11:30 p.m. Concurrent Session II Adjourns

12:00 p.m. – 1:00 p.m. LUNCH (on your own)

12:00 p.m. – Dismantle Posters

Boise Centre (400 A)

1:00 p.m. – 2:00 p.m.	PAA Business Meeting	Boise Centre (410 A)
2:00 p.m. – 4:00 p.m.	Research Meetings	Boise Centre (410 A, B, C are available)
6:00 p.m. – 7:00 p.m.	PAA Awards Banquet Reception	JUMP Pioneer Combo
7:00 p.m. – 10:00 p.m.	PAA Awards Banquet	JUMP Pioneer Combo

THURSDAY, July 26, 2018

Morning	BREAKFAST (On Your Own)	
9:00 a.m. – 4:00 p.m.	Agriculture Tour (Wine and Hops)	Meet at Boise Centre
8:30 a.m. – 4:00 p.m.	Whitewater Rafting Tour	