

DELEGATE PROGRAM

Monday morning, August 11, 2008

OPENING SESSION

Presiding: PAA President Alexander Pavlista

8:30 am

WELCOME

Joe Sieczka and Don Halseth, Dept. Horticulture, Cornell – Co-Chairs 2008 LAC
Dr. Jan P. Nyrop, Senior Associate Dean, College of Agriculture and Life Sciences,
Cornell University, Ithaca, NY

Utilization and Marketing SYMPOSIUM 2008

“Potato Market Challenges and Opportunities”

8:45 am **Introduction and opening remarks**

Gareau, Robert. Potatoes New Brunswick, Grand Falls, NB.

9:00 am **Potato market trends in developing countries.**

(001) Thiele, G¹, CC Crissman¹, JW Low³, F Ezeta⁴, D Campilan⁵, T Walker².
¹International Potato Center, Lima, Peru, ² Asheville, NC, International Potato
Center ³Nairobi Kenya, ⁴Jakarta, Indonesia, ⁵New Delhi, India.

9:45 am Break

10:15 am **Bringing supply and demand into balance at levels of economic
sustainability for fresh market growers through cooperative principles.**

(002) Frankel, Lee. United Potato Growers of America, Salt Lake City, UT.

10:45 am **Breaking down trade barriers for potatoes.**

(003) Basten, Gerard. RealPotatoes Ltd., Charlottetown, PEI.

11:15 am **Consumer dynamics and preferences driving change in the potato industry.**

(004) Ottum, Steve and Jeff Bragg, Potandon Produce, Idaho Falls, ID.

11:45 am **Symposium summary.**

Nedrow, Bret. JR Simplot Company, Grand Forks, ND.

Monday afternoon, August 11, 2008

CONCURRENT SESSION 1 – Breeding and Genetics

1:30 pm – 3:00 pm

Moderator:

- 1:30 pm **Update on the comparative assessment of genetic diversity between accessible and remote potato populations: AFLP analysis of wild potato *Solanum. stoloniferum* (formerly *S. fendleri*) distributed in SW regions of the USA.**
- (005) del Rio, AH¹, JB Bamberg², C Fernandez¹ and C Zorrilla³. ¹University of Wisconsin-Madison, Dept. of Horticulture, Madison, WI; ²USDA/Agricultural Research Service, Vegetable Crops Research Unit, US Potato Genebank, Sturgeon Bay, WI; ³International Potato Center (CIP), Lima 12, Peru.
- 1:45 pm **Evidence that two *Verticillium*-resistant potato varieties have the potential to enhance soil suppressiveness toward *Verticillium* wilt.**
- (006) Davis, J.R. University of Idaho, PSES Department, Aberdeen Research and Extension Center, Aberdeen, ID.
- 2:00 pm **Tuber dormancy lasting eight years in the wild potato *Solanum jamesii*.**
- (007) Bamberg, JB¹, CJ Fernandez¹, MW Martin¹ and JJ Pavek². ¹USDA/ARS, Potato Genebank, Sturgeon Bay, WI; ²USDA/ARS (retired), Univ ID REC, Aberdeen, ID.
- 2:15 pm **QTL analysis of internal heat necrosis.**
- (008) McCord PH¹, GC Yench¹, ME Clough², and BR Sosinski¹. ¹North Carolina State University, Dept. of Horticultural Science, Raleigh, NC; ²NCSU Dept. of Horticultural Science, Plymouth, NC.
(*Frank L Haynes Graduate Student Research Competition*)
- 2:30 pm ***CBFI* transgenic potatoes studied under drought conditions.**
- (009) Nichol NL, K Zarka, J Coombs, DS Douches. Michigan State University, Department of Crop and Soil Science, East Lansing, MI.
(*Frank L Haynes Graduate Student Research Competition*)
- 2:45 pm **The use of *Solanum verrucosum* to access 2x, 1EBN germplasm.**
- (010) Jansky, SH^{1,2}, AJ Hamernik¹ and J Bae². ²USDA-ARS, Vegetable Crops Research Unit, Madison, WI; ²University of Wisconsin-Madison, Department of Horticulture, Madison, WI.

Monday afternoon, August 11, 2008

CONCURRENT SESSION 2 – General Interest / Production and Management

1:30 pm – 3:00 pm

Moderator:

General interest

1:30 pm **Potatoes and *Solanum*'s in Ancient México.**

(011) Lozoya-Saldaña, H. Departamento de Fitotecnia, Universidad Autónoma Chapingo. Chapingo, México, 56230, México.

Production and Management

1:45 pm **Potato variety response to phosphorus fertilizer.**

(012) Thornton M¹, J Stark² and B Hopkins³. ¹University of Idaho, Parma, ID; ²University of Idaho, Idaho Falls, ID; ³Brigham Young University, Provo, UT.

2:00 pm **Effect of growing season on 'Russet Burbank' storage tuber quality.**

(013) Brandt, Tina L¹, N Olsen² and GE Kleinkopf¹. University of Idaho, ¹Kimberly, ID, ²Twin Falls, ID.

2:15 pm **Ethylene gas for sprout control in processing potato storages.**

(014) Johnson, SB. University of Maine, Cooperative Extension, Orono, ME.

2:30 pm **Growth promotion and yield increase of potatoes by new stress control technology #2.**

(015) Thornton M¹, M Pavek², P Nolte³, T Hayashi⁴, T Suzuki⁴. ¹University of Idaho, Parma, ID. ²Washington State University, Dept of Hort & LA, Pullman, WA; ³University of Idaho, Idaho Falls, ID; ⁴Kao Corporation, 1334 Minato Wakayama, JAPAN.

2:45 pm **Cultivation and analysis of anthocyanin containing types of potatoes in organic farming regarding cultivability and additional health benefits.**

(016) Hüsing, B¹, Herrmann, M-E¹, Hillebrand, S², Winterhalter, P², Schliephake U¹, Trautz, D¹. ¹University of Applied Sciences Osnabrück, Germany, ²TU-Braunschweig, Institute of Food Chemistry, Germany.

Monday afternoon, August 11, 2008

CONCURRENT SESSION 3 – Physiology

3:30 pm – 4:30 pm

Moderator:

3:30 pm **Differential response of potatoes to salinity stress and changes in the concentration of raffinose-stachiose in the leaves.**

(017) Levy D, HD Rabinowitch and Y Tzabari. Institute of Plant Sciences & Genetics in Agriculture, The Hebrew University of Jerusalem, Faculty of Agricultural, Food and Environmental Quality Sciences, Rehovot, Israel 76100.

3:45 pm **Changes in proteases and protease inhibitors during protein mobilization from seed-tubers.**

(018) Weeda, SM, GNM Kumar and NR Knowles. Washington State University, Department of Horticulture and Landscape Architecture, Pullman, WA.
(*Frank L Haynes Graduate Student Research Competition*)

4:00 pm **Engineering of vitamin B₉ biosynthesis in potato tubers.**

(019) Goyer, A¹ and DA Navarre². ¹Oregon State University-Hermiston Agricultural Research and Extension Center, Hermiston, OR; ²USDA-Agricultural Research Service, Prosser, WA, USA.

4:15 pm **Stem end defect in chipping potatoes from production fields and temperature-controlled greenhouses.**

(020) Bethke, Paul C^{1,2}, Rob Sabba¹, Charles Higgins³ and Alvin J Bussan¹. ¹Dept. Horticulture, University of Wisconsin, Madison; ²USDA ARS Madison, WI; ³Heartland Farms, Hancock WI.

Monday afternoon, August 11, 2008

CONCURRENT SESSION 4 – Production and Management

3:30 pm – 4:30 pm

Moderator:

3:30 pm **Petiole nitrate trends and production values of eight potato cultivars grown with two rates of in-season nitrogen.**

(021) Pavek, MJ and ZJ Holden. Department of Horticulture and Landscape Architecture, Washington State University, Pullman, Washington, USA.

3:45 pm **Field and greenhouse performance of potato sprouts.**

(022) Kuhl, JC¹, AJ Pantoja¹, J Smeenk² and WL Campbell³. ¹USDA-ARS, Fairbanks, AK; ²University of Alaska Fairbanks, Palmer, AK; ³Alaska Plant Materials Center, Palmer, AK.

4:00 pm **Indigenous production systems of relict potatoes and their marketing opportunities.**

(023) Roskrige, N. Massey University, Institute of Natural Resources, Palmerston North, New Zealand.

4:15 pm **Evaluation of nitrogen release from polymer coated urea in a controlled system.**

(024) Chen ZW and CM Hutchinson. University of Florida, Department of Horticultural Sciences, Gainesville, FL.
(*Frank L Haynes Graduate Student Research Competition*)

Tuesday morning, August 12, 2008

CONCURRENT SESSION 5 - Genomics

8:30 am – 10:00 am

Moderator:

8:30 am **Intragenic options for specialty crop improvement: High health and quality without foreign DNA.**

(025) Swords, Kathy, Jingsong Ye, Craig Richael, Hua Yan and Caius Rommens. J.R. Simplot Company, Simplot Plant Sciences, Boise, ID.

9:00 am **Comparative structural genomics of 1EBN potato: DArT markers for improved access to resistance genes.**

(026) Bradeen, JM¹, M Iorizzo^{1,2}, H Mann¹, L Gao¹, EA Quirin¹, R Aversano² and D Carputo². ¹University of Minnesota, Department of Plant Pathology, St. Paul, MN; ²University of Naples “Federico II”, Portici, Italy.

9:30 am **Useful promoters and terminators from *Solanum bulbocastanum* for use in potatoes and other crops.**

(027) McCue, KF, DR Rockhold, PV Allen, and WR Belknap. USDA Agricultural Research Service, Western Regional Research Center, Albany, CA.

9:45 am **Data and analysis tools on SGN, a community-based, clade-oriented database for the Solanaceae and closely related Asterids.**

(028) Menda, Naama, Isaak Teclé, Robert Buels, Tom York, Adri Mills, Anuradhja Pujar, Aureliano Bombarely and Lukas Mueller. Cornell University, Dept of Plant Breeding, Ithaca, NY.

Tuesday morning, August 12, 2008

CONCURRENT SESSION 6 – Applied Production and Management

8:30 am – 10:00 am

Moderator:

8:30 am **Evaluation of fungicide seed treatments in combination with management practices for the control of seed-borne diseases of potato.**

(029) Wharton, PS, and WW Kirk. Michigan State University, East Lansing, MI.

8:45 am **Evaluation of controlled-release nitrogen fertilizers in potato production.**

(030) Menasha, SR and DD Moyer. Cornell University Cooperative Extension of Suffolk County, Riverhead, NY.

9:00 am **Crop rotation effects on potato response to nitrogen.**

(031) Stark, JC¹, G Blaser² and BG Hopkins³. ¹University of Idaho, Idaho Falls, ID; ²Brigham Young University, Idaho, Rexburg, ID; ³Brigham Young University, Provo, UT.

9:15 am **Yield and chipping performance in the 2007 USPB-SFA national trials.**
(032) Halseth, DE. Cornell University, Ithaca, NY.

9:30 am **Potato production with drastically rising fertilizer prices: A review of nitrogen management options.**
(033) Hopkins, BG. Brigham Young University, Plant and Wildlife Sciences Department, Provo, UT.

9:45 am **Eye of newt and toe of frog - Deciphering the double, double, toil and trouble of tank-mixes for weed control in potatoes.**
(34) Hutchinson, PJS. University of Idaho, Aberdeen Research and Extension Center, Aberdeen, ID.

Tuesday morning, August 12, 2008

CONCURRENT SESSION 7 – Plant Protection

8:45 am – 10:00 am

Moderator:

8:45 am **North American Plant Protection Organization diagnostic protocols for regulated pests of potato.**
(035) Zink, Richard. USDA/APHIS/PPQ Center for Plant Health, Science and Technology, Fort Collins, CO, USA.

9:00 am **A single procedure for the isolation of viruses, PSTVd and BRR from potato plants for RT-PCR detection.**
(036) Singh, Rudra P¹, Mathuresh Singh² and Andrew Sullivan³. ¹Agriculture and Agri-Food Canada; ²Agricultural Certification Services; ³NB Department of Agriculture and Aquaculture, Fredericton, NB, Canada.

9:15 am **Infection efficiency of three laboratory methods to inoculate potato tubers with *Phytophthora infestans*.**
(037) Rodríguez, Juan¹, Asunta Thompson², Viviana Rivera¹ and Gary Secor¹. Departments of Plant Pathology¹ and Plant Sciences², North Dakota State University, Fargo, ND, USA.
(*Frank L Haynes Graduate Student Research Competition*)

9:30 am **Seasonal flight patterns of adult elaterids (Coleoptera: Elateridae) associated with potatoes in Alaska.**
(038) Pantoja, Alberto, Aaron Hagerty and Susan Emmert. USDA, ARS SARU, Fairbanks, AK.

9:45 am ***Phytophthora infestans*: races and genotypes in Toluca, México. A two year update.**
(039) Belmar-Díaz, C^{1,3}, H Lozoya-Saldaña^{2,3}, M Salgado¹ and J Bamberg⁴.
¹Facultad de Ciencias Agrícolas, Universidad Autónoma del Estado de México; ²Departamento de Fitotecnia, Universidad Autónoma Chapingo, Chapingo, St. of México, México; ³PICTIPAPA, Conjunto SEDAGRO, Metepec, St. of México, México; ⁴USDA/ARS US Potato Genebank, Sturgeon Bay, WI.

Tuesday morning, August 12, 2008

CONCURRENT SESSION 8 - Genomics

10:30 am – 12 noon

Moderator:

10:30 am **Comprehensive approaches to study quantitative traits using after-cooking darkening as a model.**

(040) Wang-Pruski, G. Nova Scotia Agricultural College, Truro, NS, Canada.

11:00 am **A light-activated signal for tuberization.**

(041) Hannapel, DJ, M Chatterjee, YY Yu, H Chen and AK Banerjee. Molecular, Cellular, and Developmental Biology Major and Dept of Horticulture, Iowa State University, Ames, Iowa.

11:30 am **Genetic variability in mineral content of potato tubers.**

(042) Brown, CR¹, M Moore², M Pavek³, D Hane⁴, R Novy⁶, JC Miller Jr⁷, SL Love⁸, S James⁵. ¹USDA/ARS, Prosser, WA; ²AgriNorthwest, Plymouth, WA; ³Washington State University, Dept. Hort/LA, Pullman, WA; Oregon State University, ⁴Hermiston Agricultural Research and Extension Center, Hermiston, OR, ⁵Central Oregon Experiment Station, Madras, OR, ⁶USDA/ARS, Aberdeen, ID; ⁷Texas A&M University, Dept. Horticulture, College Station; ⁸University of Idaho, Aberdeen Research and Extension Center, Aberdeen, ID.

11:45 am **The potato R locus codes for dihydroflavonol 4-reductase.**

(043) Zhang Y, S Cheng, H Griffiths, D De Jong and WS De Jong. Cornell University, Department of Plant Breeding and Genetics, Ithaca, NY.

Tuesday morning, August 12, 2008

CONCURRENT SESSION 9 – Applied Production and Management

10:30 am – 12 noon

Moderator:

10:30 am **Influence of hill geometry on irrigated ‘Russet Burbank’ potato.**

(044) Hatterman-Valenti, Harlene M and Collin P Auwarter. Department of Plant Sciences, North Dakota State University, Fargo, ND.

10:45 am **Wood ash, a liming and nutrient source for potato production systems.**

(045) Porter, GA and PC Ocaya, Department of Plant, Soil & Environmental Sciences, University of Maine, Orono, ME.

11:00 am **Maine potato growers meeting the USDA GAP standards.**

(046) Johnson, SB. University of Maine, Cooperative Extension, Orono, ME.

11:15 am **Potato production with drastically rising fertilizer prices: A review of phosphorus management options.**

(047) Hopkins, BG. Brigham Young University, Plant and Wildlife Sciences Department, Provo, UT.

11:30 am **Efficacy of post-harvest applied phosphorous acid on stored potato tubers for silver scurf control.**

(048) Olsen, NL¹, PB Hamm², JS Miller³, L Woodell¹ and N David². ¹University of Idaho, Twin Falls, ID; ²Oregon State University, Hermiston, OR; ³Miller Research LLC, Minidoka, ID.

11:45 am **Incorporating 1,4DMN in a CIPC based potato storage treatment program.**

(049) De Weerd, JW. 1,4GROUP, Inc., Meridian, ID.

Tuesday morning, August 12, 2008

CONCURRENT SESSION 10 – Plant Protection

10:30 am – 12 noon

Moderator:

10:30 am **Trichothecenes associated with potato dry rot caused by *Fusarium graminearum*.**

(050) Delgado, Javier A¹, Paul B Schwarz², James Gillespie², Viviana Rivera¹ and Gary A Secor¹. Department of Plant Pathology¹ and Plant Sciences², North Dakota State University, Fargo, ND, USA.
(*Frank L Haynes Graduate Student Research Competition*)

10:45 am **Development of a greenhouse assay to evaluate potato germplasm for susceptibility to powdery scab.**

(051) Houser, AJ and R Davidson. Colorado State University, Department of Horticulture and Landscape Architecture, San Luis Valley Research Center, Center, CO.
(*Frank L Haynes Graduate Student Research Competition*)

11:00 am **Evaluation of Fluazinam application methods in-furrow for control of powdery scab on potato.**

(052) Davidson, RD and A Houser. Colorado State University, Department of Horticulture and Landscape Architecture, San Luis Valley Research Center, Center, CO.

11:15 am **Recent genetic changes in the late blight populations in USA.**

(053) Deahl KL¹, DS Shaw² and LR Cooke³. ¹Genetic Improvement of Fruits and Vegetables Laboratory, USDA, ARS, Beltsville, MD, USA; ²Sárvári Research Trust, Henfaes Research Centre, Abergwyngregyn, Llanfairfechan, LL33 0LB; ³Applied Plant Science & Biometrics Division, Agri-Food & Biosciences Institute, Newforge Lane, Belfast, UK.

11:30 am **Phenotypic and genotypic diversity in oospore-derived progeny of *Phytophthora infestans*.**

(054) Tumbalam, Pavani¹, William W Kirk¹, David S Douches² and G Adams¹. Plant Pathology¹, Crop and Soil Science², Michigan State University, East Lansing, MI, USA.

11:45 am **Integrating pest management practices in eastern Oregon to control potato tuberworm.**

(055) Rondon, SI, and GH Clough. Oregon State University, Hermiston Agricultural Research and Extension Center, Crop and Soil Science, Hermiston, OR.

Tuesday afternoon, August 12, 2008

CONCURRENT SESSION 11 - Genomics

1:30 pm – 2:45 pm

Moderator:

1:30 pm **Molecular characterization of potato disease resistance genes.**

(056) Halterman, D^{1,2}, Z Liu², Y Chen² and S Stephenson¹. ¹Vegetable Crops Research Unit, USDA/ARS; ²University of Wisconsin-Madison, Madison, WI.

2:00 pm **Microarray analysis of potato gene expression during common scab infection.**

(057) Goyer, C¹, D De Koeyer¹, H Tai¹, V Gustafson², R Griffith¹, C Rothwell². ¹Agriculture and Agri-Food Canada, Potato Research Centre, Fredericton, NB, Canada; ²BioAtlantech, Fredericton, NB, Canada.

2:30 pm **Advances in precision breeding improve variety disease resistance.**

(058) Kawchuk, LM and B Bizimungu. Agriculture and Agri-Food Canada, Lethbridge, Alberta, T1J 4B1.

Tuesday afternoon, August 12, 2008

CONCURRENT SESSION 12 – Physiology /Utilization and Marketing

1:30 pm – 2:45 pm

Moderator:

1:30 pm **Screening of resistant starch and alpha amylase inhibitor levels in Colorado grown potato selections and cultivars.**

(059) Jayanty, Sastry¹, T Pouland¹, N Tamada³, DG Holm¹, H Thomson² and S Wallner². ¹San Luis Valley Research Center, Department of Horticulture and Landscape Architecture, Colorado State University, Center, CO; ²Department of Horticulture and Landscape Architecture, Colorado State University Fort Collins CO; ³Sierra Grande High School, Blanca, CO.

1:45 pm **Sugar end defect in stressed Russet Burbank potatoes grown under controlled environment conditions.**

(060) Bethke, Paul C^{1,2}, Rob Sabba¹ and Alvin J Bussan¹. ¹Dept. Horticulture, University of Wisconsin, Madison; ²USDA ARS Madison, WI.

2:00 pm **In-season calcium application can improve tuber internal quality of Atlantic, a chipping cultivar.**

(061) Palta, JP, BH Karlsson and SE Vega. University of Wisconsin, Department of Horticulture, Madison, WI.

2:15 pm **Colored potato functional compounds suppress both insulin- and insulin-like growth factor-1-promoted prostate cancer cell proliferation.**

(062) Reddivari, L¹, J Vanamala², SH Safe³ and JC Miller Jr¹. ¹Texas A&M University, Department of Horticultural Sciences, College Station, TX; ²Institute for Obesity Research & Program Evaluation, ³Dept. of Veterinary Physiology & Pharmacology.

Utilization and Marketing

2:30 pm **Lutein content of yellow-fleshed potatoes grown in Alberta.**

(063) Konschuh, Michele, Tricia McAllister and Darcy Driedger. Alberta Agriculture and Rural Development, Crop Diversification Centre South, Brooks, AB, Canada.

Tuesday afternoon, August 12, 2008

CONCURRENT SESSION 13 – Breeding and Genetics

1:30 pm – 3:00 pm

Moderator:

1:30 pm **Loci that influence anthocyanin pigmentation of potato tuber flesh.**

(064) Zhang, Y, CS Jung and WS De Jong. Cornell University, Department of Plant Breeding and Genetics, Ithaca, NY.
(*Frank L Haynes Graduate Student Research Competition*)

1:45 pm **Phenolic and glycoalkaloid levels of *S. jamesii* accessions and their anti-proliferative effect on human prostate and colon cancer cells *in vitro*.**

(065) Nzaramba, MN¹, L Reddivari¹, JB Bamberg² and JC Miller, Jr¹. Department of Horticultural Sciences, Texas A&M University, College Station, TX; ²US Potato Genebank, Sturgeon Bay, WI.
(*Frank L Haynes Graduate Student Research Competition*)

2:00 pm **Update on late blight resistance breeding in Michigan.**

(066) Douches, D¹, J Coombs¹, J Estelle¹, D Berry¹, K Zarka¹, W Kirk² and R Schafer². ¹Dept. of Crop and Soil Sciences, ²Dept. of Plant Pathology, Michigan State University, East Lansing, MI.

2:15 pm **Prospect, a new high yielding potato variety with resistance to *Verticillium* fungus and “sugar ends”, for production of French fries.**

(067) Coffin, J¹, R Coffin¹, A Thompson², B Geisel³, W Hardy⁴, S Veenhuis-MacNeill⁴, W Arsenault⁵ and H Platt⁵. ¹Privar Farm Inc., North Wiltshire, PE, Canada; ²NDSU, Fargo, ND; ³Gaia Consulting Ltd., Manitoba; ⁴Cavendish Farms, Summerside, PE; ⁵AAFC, PE.

2:30 pm **Estimation of optimal sample size for detecting tuber internal defects in potato using a bootstrap method.**

(068) Navarro, F¹ and JP Palta.² University of Wisconsin-Madison, Rhinelander Agricultural Research Station, Rhinelander WI; ²Horticulture Department, Madison WI.

2:45 pm **On-farm potato variety selection – a hobby?**

(069) VanderZaag, P and EB Ganga. SunRISE Produce, Alliston, ON Canada.

Tuesday afternoon, August 12, 2008

POSTER SESSION

3:00 pm – 5:30 pm

3:30 pm-5:30 pm Authors present

Production and Management

(088) **Evaluation of alternative fertilizer programs and potato varieties in seepage irrigated potato production.**

Chen, ZW and CM Hutchinson. University of Florida. Department of Horticultural Sciences, Gainesville, FL.

Physiology

(089) **Role of metabolism in ABA homeostasis during potato tuber dormancy.**

Suttle, JC¹ and L Destefano-Beltrán². ¹USDA-ARS Northern Crop Science Lab, 1307 18th St. N, Fargo, ND; ²Universidad Peruana, Cayetano Heredia, Lima 31, Peru.

(090) **LC-MS analysis of glycoalkaloid diversity among seven potato genotypes.**

Shakya, Roshani¹ and Duroy A Navarre². ¹Department of Horticulture, Washington State University, Prosser, WA; ²USDA-Agricultural Research Service, Washington State University, Prosser, WA.

(091) **Gene expression associated with tuber periderm maturation.**

Lulai, E¹, J Neubauer¹ and A Thompson². ¹USDA-ARS, Northern Crop Sciences Laboratory; ²NDSU Department of Plant Sciences, Fargo, ND.

(092) **Screening of advanced potato breeding clones for resistance to cold-induced-sweetening (CIS).**

Gupta SK¹, Glynn M² and Sowokinos JR¹. ¹Department of Horticultural Science, University of Minnesota, St. Paul, MN; ²USDA/ARS Potato Research Worksite, East Grand Forks, MN.

(093) **Stability of potato tuber carotenoid content in storage.**

Haynes, KG¹, BA Clevidence², DD Rao², and BT Vinyard³. ¹ Genetic Improvement of Fruits and Vegetables Laboratory, ² Food Components and Health Laboratory, ³ Biometrical Consulting Service, USDA/ARS, Beltsville, MD.

Breeding and Genetics

- (094) **Little genetic and no additive genetic variance for resistance to common scab in a *Solanum phureja*-*S. stenotomum* population.**
Burkhart, CR¹, BJ Christ¹, KG Haynes², and BT Vinyard³. ¹Department of Plant Pathology, The Pennsylvania State University, University Park, PA; ²USDA/ARS, Genetic Improvement of Fruits and Vegetables Laboratory, Beltsville, MD; ³USDA/ARS, Biometrical Consulting Service, Beltsville, MD.
- (095) **Partitioning the sources of variation in the potato *Fusarium* dry rot disease triangle.**
Haynes, KG¹, BJ Christ² and DE Halseth³. ¹USDA/ARS, Genetic Improvement of Fruits and Vegetables Laboratory, Beltsville, MD, ²Department of Plant Pathology, The Pennsylvania State University, University Park, PA; ³Department of Horticulture, Cornell University, Ithaca, NY.
- (096) **Resistance to Potato Virus Y (PVY) in the recently released variety Premier Russet.**
Ortega, J¹, JM Crosslin², S Yilma¹, JL Whitworth³, RG Novy³ and MI Vales¹.
¹Oregon State University, Department of Crop and Soil Science, Corvallis, OR; ²USDA-ARS, Prosser, WA; ³USDA-ARS, Aberdeen, ID.
- (097) **Alta Crown-A new russet potato variety suitable for french fry and fresh market uses.**
Bizimungu, B¹, DR Lynch¹, DG Holm², LM Kawchuk¹, M Korschuh³, J Wahab⁴, D Waterer⁵, D Driedger³, P McAllister⁶, R Howard³ and HW Platt⁷.
¹Agriculture and Agri-Food Canada, Lethbridge, Alberta, Canada; ²San Luis Valley Research Center, CSU, CO, USA; ³Alberta Agriculture and Food, Brooks, Alberta, Canada; ⁴Canada-Saskatchewan Irrigation Diversification Centre, Outlook, Saskatchewan, Canada; ⁵University of Saskatchewan, Saskatoon, Saskatchewan, Canada; ⁶Alberta Agriculture and Food, Edmonton, Alberta, Canada; ⁷ Agriculture and Agri-Food Canada, Charlottetown, PE, Canada.
- (098) **Comparison of different assessment methods for common scab from the National Common Scab Trials.**
Wanner, LA¹, KG Haynes¹, C Thill², JA Bradeen², RG Novy³ and JL Whitworth³. ¹USDA/ARS, Beltsville, MD; ² Univ. of Minnesota, St. Paul, MN; ³USDA/ARS, Aberdeen Research and Extension Center, Aberdeen, ID.

Plant Protection

- (099) **Effect of climate change on the over winter survival of volunteer potatoes in Michigan.**
Wharton, PS and WW Kirk. Michigan State University, East Lansing, MI.
- (100) **Controlling early blight and other diseases of potato with an advanced liquid formulation of famoxadone.**
Shepherd, C. DuPont Crop Protection, Stine-Haskell Research Center, Newark DE.

- (101) **Screening for resistance to potato tuberworm in Oregon.**
Rondon, SI¹, CB Brown², D Hane¹ and MI Vales³. ¹Oregon State University, Hermiston Agricultural Research and Extension Center, Hermiston, OR; ²USDA-ARS, Prosser; ³Oregon State University, Crop and Soil Science, Corvallis, OR.
- (102) **Potato late blight and pink rot interactions and control.**
Platt¹, HW (Bud), RD Peters¹ and K Al-Mughrabi². ¹AAFC, Crops & Livestock Research Centre, Charlottetown, PEI Canada; ²Potato Development Centre, Department of Agriculture and Aquaculture, Wicklow, NB, Canada.
- (103) **Simulated glyphosate drift to irrigated potato (*Solanum tuberosum*).**
 Auwarter, Collin P and Harlene M Hatterman-Valenti. Department of Plant Sciences, North Dakota State University, Fargo, ND.

Thursday morning, August 14, 2008

CONCURRENT SESSION 14 – Breeding and Genetics

8:45 am – 10:00 am

Moderator:

- 8:45 am **Progress in mapping and cloning of a late blight R-gene from *S. microdontum*.**
- (070) Zarka, D¹, D Douches¹, and W Kirk². ¹Dept. of Crop and Soil Sciences, ²Dept. of Plant Pathology, Michigan State University, East Lansing, MI.
- 9:00 am **Development of a grade standard for the breeding and selection of fingerling potato cultivars.**
- (071) Holm, DG and F Goktepe. Colorado State University, Department of Horticulture and Landscape Architecture, SLV Research Center, Center, CO.
- 9:15 am **Commercialization of potato tuberworm resistant potatoes in South Africa: Development of new Bt lines.**
- (072) Douches, DS¹, J Brink², H Quemada², W Pett³, K Maredia³ and K Zarka¹. ¹Department of Crop and Soil Sciences, ²Institute of International Agriculture, ³Department of Entomology, Michigan State University, East Lansing, MI.
- 9:30 am **Selection for resistance to common scab in Wisconsin potato breeding lines.**
- (073) Navarro, F¹, Eugenia Banks², Charlie Higgins³, Bryan Bowen¹ and JP Palta⁴. ¹Potato Breeding Program. University of Wisconsin-Madison, Rhinelander Agricultural Research Station, Rhinelander WI; ²OMAFRA, Ontario, Canada; ³Hearland Farms, Hancock WI; ⁴Horticulture Department, Madison WI.
- 9:45 am **Breeding for resistance to PVY in tetraploid potatoes using marker assisted selection.**
- (074) Vales, MI, RJ Ottoman, JA Ortega, O Riera-Lizarazu and S Yima. Oregon State University, Dept. of Crop and Soil Science, Corvallis, OR.

Thursday morning, August 14, 2008

CONCURRENT SESSION 15 – Production and Management

8:45 am – 10:00 am

Moderator:

- 8:45 am **Identifying constraints to potato system sustainability: Soils.**
(075) Honeycutt, W., T Griffin, Z He, R Larkin, M Olanya and J Halloran. USDA-ARS New England Plant, Soil, and Water Laboratory, Orono, ME.
- 9:00 am **Identifying constraints to potato system sustainability: Diseases.**
(076) Larkin, R., M Olanya, T Griffin, W Honeycutt, Z He, and J Halloran. USDA-ARS New England Plant, Soil, and Water Laboratory, Orono, ME.
- 9:15 am **Identifying constraints to potato system sustainability: Economics.**
(077) Halloran, J., T Griffin, W Honeycutt, R Larkin, M Olanya, and Z He. USDA-ARS New England Plant, Soil, and Water Laboratory, Orono, ME.
- 9:30 am **Exchangeable soil calcium may not reliably predict in-season calcium requirements for enhancing potato tuber calcium concentration.**
(078) Gunter, Christopher C¹, Jiwan P Palta². ¹ North Carolina State University, Department of Horticultural Science, NC State University, Raleigh, NC; ²University of Wisconsin-Madison, Department of Horticulture, Madison, WI.
- 9:45 am **Regularly published newsletter is effective in meeting educational needs of Idaho potato producers.**
(079) Bohl, William H. University of Idaho, Blackfoot, ID.

Thursday morning, August 14, 2008

CONCURRENT SESSION 16 – Plant Protection

10:30 am – 11:15 am

Moderator:

- 10:30 am **Is biofumigation interfering with biocontrol?**
(080) Riga, E¹, D Henderson^{1,2}, R Ramirez³ and W Snyder³. ¹IAREC, Washington State University, Prosser, WA; ²Department of Plant Pathology; ³Department of Entomology, Washington State University, Pullman WA.
- 10:45 am **Microarray analysis of smooth skin potato mutants to study resistance mechanism for powdery scab disease in potatoes.**
(081) Jayanty, Sastry¹, N Thangada², DG Holm¹ and R Davidson¹. ¹San Luis Valley Research Center, Department of Horticulture and Landscape Architecture, Colorado State University, Center CO; ²Keystone School, San Antonio, TX.
- 11:00 am **Regional variation in pathogenic *Streptomyces* species and implications for common scab resistance breeding.**
(082) Wanner, LA and KG Haynes. USDA-Agricultural Research Service, Genetic Improvement of Fruit and Vegetable Laboratory, Beltsville, Maryland.

Thursday morning, August 14, 2008

CONCURRENT SESSION 17 – Production and Management

10:30 am – 11:45 am

Moderator:

- 10:30 am **Blocking the CO₂ -ethylene interaction with 1-methylcyclopropene.**
(083) Daniels-Lake, Barbara, R Prange, S Bishop and K Hiltz. Agriculture and Agri-Food Canada, Atlantic Food and Horticulture Research Centre, Kentville, Nova Scotia, Canada.
- 10:45 am **Effect of seed size and seed reconditioning on the growth and yield of Canela Russet.**
(084) Essah, SYC¹, JA Delgado², DG Holm¹ and RD Davidson¹. ¹Colorado State Univ., San Luis Valley Res. Ctr.; ²USDA-ARS, Fort Collins.
- 11:00 am **In-season nitrogen rate and in-row spacing influence fresh and processing market values of the potato cultivar ‘A95109-1’.**
(085) Pavek MJ and ZJ Holden. Department of Horticulture and Landscape Architecture, Washington State University, Pullman, WA, USA.
- 11:15 am **Nutrient loading by controlled release and soluble nitrogen fertilizer potato production programs during leaching irrigation events.**
(086) Worthington, Christine M and Chad M Hutchinson, University of Florida, IFAS, Horticultural Sciences Department, Gainesville, FL.
- 11:30 am **Storage practices for reducing glucose accumulation in Russet Norkotah.**
(087) Frazier, Mary Jo and Nora Olsen, University of Idaho, Kimberly, ID.