

Julia M. Harshman, Ph.D.
Postdoctoral Scholar
UC Davis, Department of Horticulture
Strawberry Breeding Program
509-663-8181 JuliaM.Harshman@gmail.com

Educational Background

PhD in Horticulture

Washington State University, December 2015

GPA: 3.94/4.0

Research: Quantifying Efficiency and Accuracy in the Washington Apple Breeding Program

Research Advisor: Dr. Kate M. Evans

MS in Plant Sciences and Landscape Architecture

University of Maryland, College Park, May 2012

GPA: 3.84/4.0

Thesis: Evaluation of Raspberry (*Rubus* sp.) Genotypes for Postharvest Quality and Resistance to *Botrytis cinerea*

Research Advisor: Dr. Christopher S. Walsh

BS in Plant Sciences and Landscape Architecture

University of Maryland, College Park, December 2009

GPA: 3.79/4.0

Research: Evaluation of McIntosh Wijick Hybrids for Mid-Atlantic Conditions

Research Advisor: Dr. Christopher S. Walsh

Research Experience

Postdoctoral Scholar, Strawberry Breeding Program, UC Davis Davis, CA

March 2016 — Present

Postdoctoral Research Assistant, Apple Breeding, Washington State University, Wenatchee, WA

January 2016 — March 2016

Graduate Research Assistant, Apple Breeding, Washington State University, Wenatchee, WA

August 2012 — December 2015

Plant Breeding Intern, Postharvest, Driscoll's, Inc.

Julia M. Harshman, PhD Curriculum Vitae

April 2015—July 2015

Biological Science Laboratory Technician, USDA-ARS Beltsville, MD

May 2012 — August 2012

Graduate Research Assistant, Raspberry Pathology, University of Maryland, College Park, MD

August 2010—May 2012

Research Assistant, Apple Breeding, University of Maryland, College Park, MD

2008— Present

Teaching Experience

Guest Lecturer, “*Apple Breeding in the Pacific Northwest*,” Plant Breeding Field Day for students in Advanced Quantitative Genetics, University of Queensland, Australia— October 20, 2014

Guest Lecturer, “*Conserving Germplasm for the Future*,” Advanced Topics in Horticulture: Fruit Breeding, Washington State University— February 11, 2014

Guest Lecturer, “*Apple fruit quality measures*,” Postharvest Physiology, Wenatchee Valley Community College— October, 2013

Presenter, “*Breeding Better Apples for Washington State*,” *Gear Up Science and Engineering Festival*, University of Washington— March 2013, 2014

Teaching Assistant, Specialty Crops: Plantation to Globalization, University of Maryland

January — May 2010, 2011, 2012

- Planned, prepared and executed weekly discussion sections
- Led exam reviews and graded exams
- Graded written essays and oral presentations

Teaching Assistant, Introduction to Horticulture, University of Maryland

January — May 2008, 2009, 2010, 2011, 2012

- Planned, prepared and executed labs including a weekly TA meeting
- Restructured, and created the lab manual for 2009, then updated yearly
- Led student exam reviews and graded exams
- Procured and maintained plant materials, and all lab materials

Professional Development

Wild Germplasm to Molecular Tools for Applied Breeding Symposium— ASHS, August 3,

2015

3 Minute Thesis Competition— WSU, March 12, 2015

Internship with Dr. Craig Hardner— University of Queensland, October— December 2014

Women's Leadership Symposium— WSU, October 3, 2014

Graduate Grant Writing Workshop— WSU, November 2, 2013

Peer Reviewed Publications

Harshman, J.M., K.M. Evans, and C. Hardner. 2016. Consideration of costs and accuracy for trial design of advanced apple selections. *Horticulture Research*. doi:10.1038/hortres.2016.8

Clark, M., N. Howard, C. Schmitz, Y. Guan, B. Orcheski, S. Verma, **J. Harshman**, S.K. Brown, K. Evans, C. Peace and J. Luby. 2016. Dissecting the QTL dynamics of harvest date in apple (*Malus × domestica*). PLOS ONE.

Harshman, J.M. and K.M. Evans. 2015. Survey of moldy core incidence in germplasm from three U.S. Apple Breeding Programs. *Journal of the American Pomological Society*. Volume 67, Issue 3, Page 168-174

Harshman, J.M., K.S. Lewers, W.M. Jurick II and C.S. Walsh. 2014. Breeding selection efficiency for raspberry postharvest shelf life affected by storage temperature and harvest season. *Euphytica* (DOI: 10.1007/s10681-014-1123-3) Volume 199, Issue 3, Page 283-292

Harshman, J.M., W.M. Jurick II, K.S. Lewers, S.Y. Wang and C.S. Walsh. 2014. Resistance to *Botrytis cinerea* and quality characteristics during storage of raspberry genotypes. *HortScience* 49 (3): 311-319

Harshman, J.M. and C.S. Walsh. 2013. Effects of the phenotype and seed parent on the size, productivity and fruit quality in second-generation seedling apple (*Malus × domestica* Borkh.) Trees. *Journal of the American Pomological Society*. Volume 69, Issue 1, Page 51-57.

Unrefereed Conference Proceedings

Walsh, C., **J.M. Harshman**, M. Newell, A. Wallis, G.R. Welsh and A. Barton. 2014. Field performance of Asian pear cultivars in the hot, humid conditions of the mid-Atlantic region of the United States. *Proceedings of the XII International Pear Symposium*

Jurick II, W., **J. Harshman**, V. Gaskins, E. Park, M. Newell and C. Walsh. 2014. Evaluation of fruit quality and susceptibility to blue mold of nine Asian pear Varieties. *Proceedings of the XII International Pear Symposium*

Harshman, J.M., K.S. Lewers, W.M. Jurick II and C.S. Walsh. 2013. *Selection efficiency of postharvest shelf life affected by storage temperature and harvest season for raspberry fruit*. Proceedings of the 2013 New England Vegetable and Fruit Conference. 2013: 2-5

Harshman, J.M., C.S. Walsh, J. Daberkow, K. Sparks, M.J. Newell and G.R. Welsh. 2008. Hybridizing 'McIntosh Wijick' and heat-tolerant apple cultivars to develop precocious seedling trees with improved tree architecture. In *IX International Symposium on Integrating Canopy, Rootstock and Environmental Physiology in Orchard Systems* 903: 193-197

Extension Publications

Butler, B. A. Wallis, C.S. Walsh, E. Snyder, and T. von Thun, **J.M. Harshman**, and G. Fazio. High-Density Orchard Systems for Maryland. *Vegetable and Fruit Headline News*. Volume 6: Issue 1. April 16 2015.

Walsh, C., **J.M. Harshman**, M. Newell and W. Jurick II. Asian Pear Research at the University of Maryland. *Vegetable and Fruit Headline News*. Volume 4: Issue 10. October 24 2013.

Walsh, C. and **J.M. Harshman**. Improving Apple Tree Architecture, Reducing Tree Stature and Promoting Apple Fruit Quality Through Field Hybridization and Selection. *Horticulture Technology Newsletter*. University Maryland Extension. December 2011, Page 5.

Walsh, C. and **J.M. Harshman**. Improving Apple Tree Architecture, Reducing Tree Stature and Promoting Apple Fruit Quality Through Field Hybridization and Selection. *Horticulture Technology Newsletter*. University Maryland Extension. December 2010, Page 3.

Talks, Abstracts, and Other Professional Papers Presented

Harshman, J.M., K. Evans and C. Hardner. 2015. *Consideration of Cost and Accuracy for Trial Design of Advanced Apple Selections*. ASHS, New Orleans. (Oral Presentation)

Walsh, C.S., **Harshman, J.M.**, A.E. Wallis, A.B. Williams, M. Newell and G.R. Welsh. 2015. *Asian Pear: A Potential Alternative Fruit Crop for Growers in the Mid-Atlantic Region*. ASHS, New Orleans. (Oral Presentation)

Harshman, J.M., K. Evans and C. Hardner. 2015. *Cost and Accuracy Considerations for Trial Design of Advanced Apple Selections*. National Association of Plant Breeders Annual Meeting Pre-tour, Prosser, WA. (Poster Presentation)

Evan, K.M. and **J.M. Harshman**. 2015. *WSU Apple Breeding Program*. National Association of Plant Breeders Annual Meeting Pre-tour, Prosser, WA. (Oral Presentation)

Evans, K.M. and **J.M. Harshman**. 2015. Fruit Evaluation in the WSU Apple Breeding Program. *AgroFresh Fruit School*, Wenatchee, WA. (Oral Presentation)

Harshman, J.M., and K.M. Evans. 2015. Apple varieties of the future from WSU's apple breeding program. *North Central Washington Apple Day*, Wenatchee, WA. (Oral Presentation)

Harshman, J.M., Evans, K., Peace, C. and C. Hardner. 2014. Optimization Criteria for Field Trials of the Washington State University Apple Breeding. *7th International Rosaceae Genomics Conference*, Seattle, WA. (Oral Presentation)

Ru, S., Edge-Garza, D., **Harshman, J.**, Evans, K., Jung, S., Main, D., and C. Peace. 2014. Seedling Select: A Web-based Software Tool to Facilitate Cost Modeling of Marker-assisted Seedling Selection (MASS) in Rosaceae Tree Fruit. *7th International Rosaceae Genomics Conference*, Seattle, WA. (Poster Presentation)

Evans, K.M. and **J.M. Harshman**. 2014. Fruit Evaluation in the WSU Apple Breeding Program. *AgroFresh Fruit School*, Wenatchee, WA. (Oral Presentation)

Verma, S., C. Schmitz, M. Clark, Y. Guan, B. Orcheski, **J. Harshman**, K. Evans, S.K. Brown, J.R. McFerson, N. Bassil, U. Rosyara, M. Bink, J. Luby, E. van de Weg, A.F. Iezzoni, and C. Peace. 2013. Genome-wide QTL Analyses Uncovers SNP Marker-based Functional Alleles for Apple "Fresh Sensation" Traits. ASHS, Palm Desert. (Oral Presentation)

Harshman, J.M., W.M. Jurick, K.S. Lewers and C.S. Walsh. 2012. *Evaluation of raspberry (Rubus sp.) genotypes for postharvest quality and resistance to Botrytis cinerea*. ASHS, Miami. (Oral Presentation)

Proposal Presentations

Harshman, J.M. *Testing the utility of the DA meter for apple maturity measures in WA*. PI: K.M. Evans. WTFRC. January 2014

Harshman, J.M. and P.J. Sandefur. *Support systems to deliver elite new cultivars for extended storage*. PIs: K.M. Evans, C. Peace, C. Hardner. WTFRC. January 2013

Invited Presentations

Harshman, J.M. *Giant Interviews— NAPB/ PBCC Annual Meeting 2015*. Seed World. July 2015 <http://seedworld.com/julia-harshman-ph-d-student-wsu-napbpbcc-annual-meeting-2015-giant-views/>

Harshman, J.M., K. Evans, C. Peace and C. Hardner. *Optimization Criteria for Field Trials of*

the Washington State University Apple Breeding. Driscoll's Global Staff Meeting. September 2014

Harshman, J.M., K.S. Lewers, W.M. Jurick II and C.S. Walsh. *Selection efficiency of postharvest shelf life affected by storage temperature and harvest season for raspberry fruit*. Presented by C.S. Walsh. New England Vegetable and Fruit Conference. December 2013

Funded Grants

Pre-Doctoral Fellowship. **J.M. Harshman**. \$60,400 from NIFA-AFRI in August 2014. (Competitive; no indirect costs).

Thompson Travel Fellowship. **J.M. Harshman**. \$500 from Maryland State Horticulture Society's competitive grants program in April 2013. (Competitive; no indirect costs).

Evaluation of Raspberry (Rubus sp.) Genotypes for Postharvest Quality and Resistance to Botrytis cinerea. Walsh, C.S. and **J.M. Harshman**. \$26,000 from Maryland Agricultural Experiment Station in June 2011. (Competitive; no indirect costs).

Improving Apple Tree Architecture and Reducing Tree Stature Through Field Hybridization and Selection. Walsh, C.S. and **J.M. Harshman**. \$3,850 from the Maryland State Horticulture Society's competitive grants program in April 2011. (Competitive; no indirect costs).

Improving Apple Tree Architecture and Reducing Tree Stature Through Field Hybridization and Selection. Walsh, C.S. and **J.M. Harshman**. \$3,850 from the Maryland State Horticulture Society's competitive grants program in April 2010. (Competitive; no indirect costs).

Improving Apple Tree Architecture and Reducing Tree Stature Through Field Hybridization and Selection. Walsh, C.S. and **J.M. Harshman**. \$3,850 from the Maryland State Horticulture Society's competitive grants program in April 2009. (Competitive; no indirect costs).

Patents

Walsh, Chris S. and **J. M. Harshman**. 2014. 'Antietam Blush' apple. Filed November 20, 2014. Patent Pending.

Professional Memberships

American Society for Horticultural Sciences

American Pomological Society

National Association of Plant Breeders

Departmental and Professional Service

- Member of the National Association of Plant Breeders Organizing Committee for the Annual Meeting, 2015
- Technical moderator for all sessions of the 7th International Rosaceae Genomics Conference in Seattle, WA, 2014
- Graduate Student Representative of the Search Committee for the Chair of Plant Sciences and Landscape Architecture Department, 2011

Academic Volunteer Activities

- Satellite Representative for the Horticulture Graduate Student Organization Wenatchee, WA, Fall 2013 to Spring 2015
- Lead for updating, restructuring, and cataloguing the Research Center Library 2013

Honors and Awards

- ASHS Annual Conference Travel Grant, Spring 2015
- Eldred L. Jenne Scholarship, academic year 2015/2016
- Everett and Hellen Kreizinger Scholarship, academic year 2015/2016
- Association for Faculty Women Harriet B. Rigas Award for Outstanding Doctoral Candidate, 2015
- The Richard R. and Constance M. Albrecht Scholarship, academic year 2015/2016
- ASHS Symposium and Pre-conference Workshop Travel Award, March 2015
- Department of Horticulture Scholarship Award, academic year 2014/2015
- Hambelton Scholarship, Fall 2013
- Francis C. Stark, Jr. Fund for Learning Resources, Spring 2012
- Outstanding Graduate Teaching Assistant in Plant Sciences, Spring 2011
- A.F. Vierheller Award, Fall 2009
- Graduation Speaker for the College of Agriculture and Natural Resources, Fall 2009
- Plant Science Leadership Award, Spring 2009
- Francis R. Gouin Undergraduate Research Award, Spring 2008