

SHAWN A. MEHLENBACHER

Dept. of Horticulture, Oregon State University, 4017 ALS Bldg, Corvallis, OR 97331
Phone: (541) 737-5467; Fax: (541) 737-3479; shawn.mehlenbacher@oregonstate.edu

EDUCATION

Ph.D. 1982 Cornell University, Plant Breeding
B.S. 1978 Pennsylvania State University, Horticulture

RESEARCH AND PROFESSIONAL EXPERIENCE

<u>Dates</u>	<u>Position and Institution</u>	<u>Responsibilities</u>
2000-present	Oregon Hazelnut Industry Professor, Oregon State Univ.	Tree Crop Breeding
1995-present	Professor, Horticulture, Oregon State Univ.	Tree Crop Breeding
1990-1995	Associate Professor, Horticulture, Oregon State Univ.	Tree Crop Breeding
1986-1990	Assistant Professor, Horticulture, Oregon State Univ.	Tree Crop Breeding
1982-1986	Assistant Professor, Horticulture, Rutgers University (NJ)	Tree Fruit Breeding

TEACHING

PBG 450/550	Plant Breeding	4 credits, annually
PBG 551	Breeding Clonal Crops	1 credit, in odd-number years
HORT 251	Fruits and Nuts	2 credits, nut lectures, alternate years

HONORS AND AWARDS (since 2000)

Fellow, International Society for Horticultural Science (ISHS), 2021.
OSU Industry Partnering Award for work with the Oregon hazelnut industry, 2018.
Invited keynote speaker, IX International Congress on Hazelnut, Samsun, Turkey, August, 2017.
The "BIG NUT", Northern Nut Growers Association, 2015-16.
OSU College of Agricultural Sciences Briskey Award for Faculty Excellence, August 2014.
Merit Award, Northern Nut Growers Association, August 2014.
OSU College of Agricultural Sciences & Agricultural Research Foundation, Distinguished Faculty Award, August 2013.
Wilder Medal, American Pomological Society, for outstanding service to horticulture in the broad area of pomology, with special consideration to the breeding of meritorious varieties of fruits and nuts, August 2013.
OSU College of Agricultural Sciences, F.E. Price/Agricultural Research Foundation Award for Excellence in Research, 2009.
Oregon Hazelnut Industry Professorship (endowed professorship) (2000-present)

MEMEBERSHIP IN PROFESSIONAL ORGANIZATIONS

American Society for Horticultural Science (ASHS)
International Society for Horticultural Science (ISHS)
Northern Nut Growers Association, lifetime member

GRANTS AND OTHER PROGRAM SUPPORT (since 2014)

Genomic tools, genetic resources and outreach to expand commercial U.S. hazelnut production. (USDA-NIFA-SCRI). [With Tom Molnar (Rutgers University), Scott Josiah (Univ. of Nebraska) and Adam Howard (National Arbor Day Foundation)]. OSU share \$938,738. Duration 5 years (2016-2021) plus 1 year no-cost extension. OSU was the lead institution.

Securing and expanding the U.S. hazelnut industry through breeding for resistance to eastern filbert blight. (USDA-NIFA-AFRI). Total budget ~\$490,000; OSU share \$241,584. Duration 24 months (2014-15). Rutgers University was the lead institution.

Oregon Hazelnut Commission – breeding, advanced selection evaluation. ~\$300,000 per year. USDA USDA-ARS Specific Cooperative Agreement for Eastern Filbert Blight research. ~\$45,000 per year (2007-2012, 2014-present).

HAZELNUT CULTIVARS AND POLLINIZERS RELEASED (since 2006)

OSU 541.147 "The Beast"	2020	'Tonda Pacifica'	2010
'PollyO'	2018	'Jefferson'	2009
'Burgundy Lace' ornamental	2015	'Eta' and 'Theta' pollinizers	2009
'McDonald'	2014	'Yamhill'	2008
'Wepster'	2013	'Red Dragon' ornamental	2008
'Dorris'	2012	Sacajawea'	2006
'York' and 'Felix' pollinizers	2012		

REFEREED PUBLICATIONS (since 2016)

Komaei Koma, G., M. Şekerli, J.W. Snelling and S.A. Mehlenbacher. 2021. New sources of eastern filbert blight resistance and simple sequence repeat markers on Linkage Group 6 in hazelnut (*Corylus avellana* L.). *Frontiers in Plant Science* (hazelnut issue) (submitted).

Şekerli, M., G. Komaei Koma, J.W. Snelling and S.A. Mehlenbacher. 2021. New simple sequence repeat markers on Linkage Groups 2 and 7 and investigation of new sources of eastern filbert blight resistance in hazelnut (*Corylus avellana*). *J. Amer. Soc. Hort. Sci.* 146 (in press).

Hill, R., C. Baldassi, J.W. Snelling, K.J. Vining and S. Mehlenbacher. 2021. Fine mapping of the locus controlling self-incompatibility in European hazelnut. *Tree Genetics and Genomes* 17:6. doi.org/10.1007/s11295-020-01485-5

Revord, R.S., S.T. Lovell, J.M. Capik, S. Mehlenbacher and T.J. Molnar. 2020. Eastern filbert blight resistance in American and interspecific hybrid hazelnuts. *J. Amer. Soc. Hort. Sci.* 145 doi.org/10.21273/JASHS04732-19

Honig, J.A., M.F. Muehlbauer, J.M. Capik, C. Kubik, J.N. Vaiciunas, S. A. Mehlenbacher, and T.J. Molnar. 2019. Identification and mapping of eastern filbert blight resistance quantitative trait loci in European hazelnut using double digestion restriction site associated DNA sequencing. *J. Amer. Soc. Hort. Sci.* 144(5):295-304. doi.org/10.21273/JASHS04694-19

Molnar, T.J., S. Mehlenbacher, P. Engel, and J. Capik. 2019. Multiple sources of eastern filbert blight resistance provide breeding utility in New Jersey. *J. Amer. Pomol. Soc.* 73(3):178-192.

Mehlenbacher, S.A., D.C. Smith and R.L. McCluskey. 2019. 'PollyO' hazelnut. *HortScience* 54:1429-1432.

- Torello Marinoni D., N. Valentini, E. Portis, A. Acquadro, C. Beltramo, S.A. Mehlenbacher, T.C. Mockler, E. Rowley and R. Botta. 2018. High density SNP mapping and QTL analysis for time of leaf budburst in *Corylus avellana* L. PLoS ONE 13(4): e0195408. doi.org/10.1371/journal.pone.0195408
- Muehlbauer, M., J.M. Capik, T.J. Molnar and S.A. Mehlenbacher. 2018. Assessment of the 'Gasaway' source of resistance to eastern filbert blight in New Jersey. Scientia Horticulturae 235:367-372.
- Bhattarai, G. and S.A. Mehlenbacher. 2018. Discovery, characterization and linkage mapping of simple sequence repeat markers in hazelnut. J. Amer. Soc. Hort. Sci. 143:347-362. doi.org/10.21273/JASHS04461-18
- Mehlenbacher, S.A., D.C. Smith and R.L. McCluskey. 2018. 'York' and 'Felix' hazelnut pollenizers. HortScience 53:904-910. doi.org/10.21273/HORTSCI12836-18
- Mehlenbacher, S.A., D.C. Smith, and R.L. McCluskey. 2018. 'Burgundy Lace' ornamental hazelnut. HortScience 53:387-390 doi.org/10.21273/HORTSCI12623-17
- Rowley, E.R., R. VanBuren, D.W. Bryant, H.D. Priest, S.A. Mehlenbacher, and T.C. Mockler. 2018. A draft genome and high-density genetic map of European hazelnut (*Corylus avellana* L.). BioRxiv preprint posted on-line 11 Dec. 2018.
- Bhattarai, G., S.A. Mehlenbacher, and D.C. Smith. 2017. Inheritance and mapping of eastern filbert blight resistance from 'Uebov' hazelnut. J. Amer. Soc. Hort. Sci. 142:289-297.
- Sathuvalli, V., S. Mehlenbacher, and D. Smith. 2017. High-resolution genetic and physical mapping of the eastern filbert blight resistance region in 'Jefferson' hazelnut (*Corylus avellana* L.). The Plant Genome 10(2) doi.org/10.3835/plantgenome2016.12.0123
- Bhattarai, G. and S.A. Mehlenbacher. 2017. Development and mapping of new tri-nucleotide repeat simple sequence repeat markers from the hazelnut genome sequence. PLoS ONE 12(5): e0178061. doi.org/10.1371/journal.pone.0178061
- Bhattarai, G., S.A. Mehlenbacher, and D.C. Smith. 2017. Eastern filbert blight disease resistance from *Corylus americana* 'Rush' and selection 'Yoder #5' maps to linkage group 7. Tree Genetics and Genomes 13:45 doi.org/10.1007/s11295-017-1129-9
- Colburn, B.C., S.A. Mehlenbacher and V.R. Sathuvalli. 2017. Development and mapping of microsatellite markers from transcriptome sequences of European hazelnut (*Corylus avellana* L.) and use for germplasm characterization. Molecular Breeding 37:16.
- Akin, M., A. Nyberg, J. Postman, S. Mehlenbacher and N.V. Bassil. 2016. A multiplexed microsatellite fingerprinting set for hazelnut cultivar identification. Eur. J. Hortic. Sci 81:327-338.
- Leadbetter, C.W., J. M. Capik, S.A. Mehlenbacher and T.J. Molnar. 2016. Hazelnut accessions from Russia and Crimea transmit resistance to eastern filbert blight. J. Amer. Pomol. Soc. 70:92-109.
- Mehlenbacher, S.A., D.C. Smith and R.L. McCluskey. 2016. 'McDonald' hazelnut. HortScience 51:757-760.

BOOK CHAPTERS (since 2012):

- Mehlenbacher, S.A. and T.J. Molnar. 2021. Hazelnut breeding. Plant Breeding Reviews, Irwin Goldman (editor). Wiley, New York (in press).

- Mehlenbacher, S.A. 2020. Miglioramento genetico del nocciuolo (in Italian). p. 54-55. In: A. Roversi. Coltivare il nocciuolo - impianto e gestione del corileto da reddito. Edizioni L'Informatore Agrario, Verona.
- Botta, R., T.J. Molnar, V. Erdoğan, N. Valentini, D. Torello Marinoni and S. Mehlenbacher. 2019. Chapter 6, Hazelnut (*Corylus* spp.) breeding. p. 157-219. In: J.M. Al-Khayri, S.M. Jain, and D.V. Johnson (eds.). Advances in Plant Breeding Strategies, Vol. 4.: Nut and Beverage Crops. doi.org/10.1007/978-3-030-23112-5_6

PUBLICATIONS, NOT REFEREED (since 2016)

- Mehlenbacher, S.A. 2020. Hazelnuts in Chile. The Nutshell (Northern Nut Growers Association).
- Mehlenbacher, S.A. 2018. Advances in genetic improvement of hazelnut. Acta Hort. 1226:1-12.
- Snelling, J., V. Sathuvalli, G. Bhattarai, E. Rowley, T. Mockler, C. Saski, D. Copetti and S.A. Mehlenbacher. 2018. Genomic resource development in hazelnut breeding. Acta Hort. 1226:39-45.
- Smith, D.C., R.L. McCluskey and S.A. Mehlenbacher. 2018. New hazelnut cultivars from Oregon State University. Acta Hort. 1226:47-52.
- Mehlenbacher, S.A. 2018. Breeding hazelnuts resistant to eastern filbert blight. Acta Hort. 1226:73-78.
- Molnar, T.J., J.J. Lombardoni, M.F. Muehlbauer, J.A. Honig, S.A. Mehlenbacher and J.M. Capik. 2018. Progress in breeding for resistance to eastern filbert blight in the eastern United States. Acta Hort. 1226:79-85.
- Gürçan, K., S.A. Mehlenbacher, M.A. Köse and H.I. Balık. 2018. Population structure analysis of European hazelnut (*Corylus avellana*). Acta Hort. 1226:87-92.
- Mehlenbacher, S.A. and G. Bhattarai. 2018. An updated linkage map for hazelnut with new simple sequence repeat markers. Acta Hort. 1226:31-37.
- Molnar, T.J., J.A. Honig, A. Mayberry, R.S. Revord, S.T. Lovell, S.A. Mehlenbacher and J.M. Capik. 2018. *Corylus americana*: a valuable genetic resource for developing hazelnuts adapted to the eastern United States. Acta Hort. 1226:115-121.
- Mehlenbacher, S.A. 2018. Release of newest variety - 'PollyO' (OSU 1108.001). Proc. Nut Growers Soc. OR, WA & BC 103:100-111.
- Mehlenbacher, S.A. 2017. USDA specialty crop research initiative grant. Proc. Nut Growers Soc. OR, WA & BC 102:55-60.
- Mehlenbacher, S.A. 2016. OSU breeding program. Proc. Nut Growers Soc. OR, WA & BC 101:74-83.
- Mehlenbacher, S.A. 2016. Hazelnut breeding. Proc. Nut Growers Soc. OR, WA & BC 101:116, 118, 120.