

Download Past Research White Papers and PowerPoint Presentations

[PowerPoint: Hazelnuts Resistant to Eastern Filbert Blight: Are We There Yet? \(12.3 MiB\)](#)

[Developing Hazelnuts for the Eastern United States \(148 KB\)](#)

[Accelerated Screening of Hazelnut Seedlings for Resistance to Eastern Filbert Blight \(560 KB\)](#)

[Survey of Hazelnut Germplasm from Russia and Crimea for Response to Eastern Filbert Blight \(80.2 KB\)](#)

[Physiological Responses of Four Hazelnut Hybrids to Water Availability in Nebraska \(290 KB\)](#)

[Hybrid Hazelnut Oil Characteristics and Its Potential Oleochemical Application \(719 KB\)](#)

[Survey of Corylus Resistance to Anisogramma Anomala from Different Geographic Locations \(135 KB\)](#)

[A Call for Hazelnuts Revisited \(1 MB\)](#)

Oregon State University

S.A. MEHLENBACHER

Hazelnut Cultivars and Pollinizers Released

Four hazelnut pollinizers 1990 (VR 4-31, VR 11-27, VR 20-11 & VR 23-18)

“Willamette” hazelnut 1990

“Lewis” hazelnut 1997

“Clark” hazelnut 1999

“Gamma” hazelnut pollinizer 2002

“Delta” hazelnut pollinizer 2002

“Epsilon” hazelnut pollinizer 2002

“Zeta” hazelnut pollinizer 2002

“Santiam” hazelnut 2005

“Sacajawea” hazelnut 2006

“Yamhill” hazelnut 2008

“Jefferson” hazelnut 2009

“Eta” hazelnut pollinizer 2009

“Theta” hazelnut pollinizer 2009

“Tonda Pacifica” hazelnut 2010

“Red Dragon” ornamental hazelnut (redleaf contorted) (Plant Patent Applied For)

“Rosita” ornamental hazelnut (redleaf)

Published Research:

[DNA Markers Linked to Eastern Filbert Blight Resistance from a Hazelnut Selection from the Republic of Georgia](#)

[Identification and Mapping of DNA Markers Linked to Eastern Filbert Blight Resistance from OSU 408.040 Hazelnut](#)

[Susceptibility of Hazelnut Cultivars to Filbertworm, *Cydia latiferreana*](#)

[Nuclear and chloroplast microsatellite markers to assess genetic diversity and evolution in hazelnut species, hybrids and cultivars](#)

Mehlenbacher, S.A., R.N. Brown, J.W. Davis., H. Chen, N.V. Bassil, D.C. Smith, and T.L. Kubisiak. 2004. RAPD markers linked to eastern filbert blight resistance in *Corylus avellana*. *Theor. Appl. Genet.* 108:651-656. (Published online: 21 October 2003)

Mehlenbacher, S.A. and M.M. Thompson. 2004. Inheritance of style color in hazelnut. *HortScience* 39:475-476.

Mehlenbacher, S.A. and D.C. Smith. 2004. Hazelnut pollenizers ‘Gamma’, ‘Delta’, ‘Epsilon’ and ‘Zeta’. *HortSci.* 39:1498-1499.

Chen, H., S.A. Mehlenbacher and D.C. Smith. 2005. AFLP markers linked to eastern filbert blight resistance from OSU 408.040 hazelnut. *J. Amer. Soc. Hort. Sci.* 130:412-417.

Bocacci, P., A. Akkac, N.V. Bassil, S.A. Mehlenbacher and R. Botta. 2005. Characterization and evaluation of microsatellite loci in European hazelnut (*Corylus avellana* L.) and their transferability to other *Corylus* species. *Molec. Ecol. Notes* 5:934-937.

Bassil, N.V., R. Botta and S. Mehlenbacher. 2005. Microsatellite markers in hazelnut: Isolation, characterization and cross-species amplification. *J. Amer. Soc. Hort. Sci.* 130:543-549.

Erdogan, V., S.A. Mehlenbacher, A.I. Köksal and H. Kurt. 2005. Incompatibility alleles expressed in pollen of Turkish hazelnut cultivars. *Turkish Journal of Biology* 29(2):111-116.

- Mehlenbacher, S.A. 2005. The hazelnut situation in Oregon. *Acta Horticulturae* 686:665-667.
- Mehlenbacher, S.A., R.N. Brown, E.R. Nouhra, N.V. Bassil and T.L. Kubisiak. 2005. A linkage map for hazelnut. *Acta Horticulturae* 686:135-140.
- McCluskey, R.L., A.N. Azarenko, S.A. Mehlenbacher, and D.C. Smith. 2005. Advanced selection and cultivar performance of hazelnut trials planted in 1994 and 1998 at Oregon State University. *Acta Horticulturae* 686:71-78.
- Bassil, N.V., R. Botta, and S.A. Mehlenbacher. 2005. Additional microsatellite markers of the European hazelnut. *Acta Horticulturae* 686:105-110.
- Gökirmak, T., S.A. Mehlenbacher and N.V. Bassil. 2005. Investigation of genetic diversity among European hazelnut (*Corylus avellana* L.) cultivars using SSR markers. *Acta Horticulturae* 686:141-147.
- Erdogan, V., S.A. Mehlenbacher, A.I. Koksak, and H. Kurt. 2005. Preliminary results of incompatibility alleles expressed in pollen from some Turkish hazelnut cultivars. *Acta Horticulturae* 686:157-162.
- Mehlenbacher, S.A. 2005. Release of the first commercially acceptable EFB resistant hazelnut variety. *Ann. Rep. Nut Growers Soc. OR, WA & BC* 90:33-36.
- Mehlenbacher, S.A. 2005. Turkey trip. *Ann. Rep. Nut Growers Soc. OR, WA & BC* 90:36-40.
- Yezhov, V.N., A.V. Smykov, V.K. Smykov, S.Y. Khokhlov, D.E. Zaurov, S.A. Mehlenbacher, T.J. Molnar, J.C. Goffreda and C.R. Funk. 2005. Genetic resources of temperate and subtropical fruit and nut species at the Nikita Botanical Gardens. *HortScience* 40:5-9.
- Mehlenbacher, S.A. 2006. Evaluation and planting of varieties released from the OSU breeding program. *Ann. Rep. Nut Growers Soc. OR, WA & BC* 91:50-61.
- Kubisiak. 2006. A genetic linkage map for hazelnut (*Corylus avellana* L.) based on RAPD and SSR markers. *Genome* 49:122-133.
- Lunde, C.F., S.A. Mehlenbacher and D.C. Smith. 2006. Segregation for resistance to eastern filbert blight in progeny of 'Zimmerman' hazelnut. *J. Amer. Soc. Hort. Sci.* 131:731-737.
- Mehlenbacher, S.A. and D.C. Smith. 2006. Self-compatible seedlings of the cutleaf hazelnut. *HortScience* 41:482-483.
- Mehlenbacher, S.A. 2007. Hazelnut breeding program - 2007 update. *Ann. Rep. Nut Growers Soc. OR, WA & BC* 92:75-82.
- Molnar, T.J., D.E. Zaurov, J.C. Goffreda and S.A. Mehlenbacher. 2007. Survey of hazelnut germplasm from Russia and Crimea for response to eastern filbert blight. *HortScience* 42:51-56.
- Mehlenbacher, S.A., A. N. Azarenko, D. C. Smith, and R. L. McCluskey. 2007. 'Santiam' hazelnut. *HortScience* 42:715-717.

- Chen, H., S.A. Mehlenbacher and D.C. Smith. 2007. Hazelnut accessions provide new sources of resistance to eastern filbert blight. *HortScience* 42:466-469.
- Mehlenbacher, S.A., D.C. Smith and R.L. McCluskey. 2008. 'Sacajawea' hazelnut. *HortScience* 43:255-257.
- Mehlenbacher, S.A. 2008. Hazelnut breeding program - 2008 update. *Ann. Rep. Nut Growers Soc. OR, WA & BC* 93:57-62.
- Mehlenbacher, S.A. 2008. Hazelnut breeding - an update from Oregon. *Nucis Newsletter*. Spring 2008.
- Sathuvalli, V. and S. A. Mehlenbacher. 2008. DNA markers linked to novel sources of resistance to eastern filbert blight. *Ann. Rep. Nut Growers Soc. OR, WA & BC* 93:63-64.
- Gurcan, K. and S. A. Mehlenbacher. 2008. Development and use of microsatellite markers in hazelnut. *Ann. Rep. Nut Growers Soc. OR, WA & BC* 93:65-67.
- Mehlenbacher, S.A. 2008. Betulaceae—*Corylus avellana*—hazelnut. p. 161–172. In: Janick, J. and R.E. Paull (eds.). *The encyclopedia of fruit and nuts*. CAB International, Cambridge University Press, Cambridge, UK.
- Mehlenbacher, S.A. and D.C. Smith. 2009. "Red Dragon" ornamental hazelnut. *HortScience* 44:843–844.
- Mehlenbacher, S.A., D.C. Smith and R. McCluskey. 2009. "Yamhill" hazelnut. *HortScience* 44:845–847.
- Gökirmak, T., S.A. Mehlenbacher and N.V. Bassil. 2009. Characterization of European hazelnut (*Corylus avellana*) cultivars using SSR markers. *Genetic Resources and Crop Evolution* 56:147–172. DOI 10.1007/s10722-008-9352-8
- Sathuvalli, V.R., H.L. Chen, S.A. Mehlenbacher and D.C. Smith. 2010. DNA markers linked to eastern filbert blight resistance in "Ratoli" hazelnut. *Tree Genetics and Genomes* DOI: 10.1007/s11295-010-0335-5.
- Sathuvalli, V. S.A. Mehlenbacher and D.C. Smith. 2010. Response of hazelnut accessions to greenhouse inoculation with *Anisogramma anomala*. *HortScience* 45:1116-1119.
- Gürcan, K. and S.A. Mehlenbacher. 2010. Transferability of microsatellite markers in the Betulaceae. *J. Amer. Soc. Hort. Sci.* 135:159-173.
- Gürcan, K. and S.A. Mehlenbacher. 2010. Development of microsatellite marker loci for European hazelnut (*Corylus avellana* L.) from ISSR fragments. *Molecular Breeding* 26:551–559. DOI 10.1007/s11032-010-9464-7
- Gürcan, K., S.A. Mehlenbacher, R. Botta and P. Boccacci. 2010. Development, characterization, segregation, and mapping of microsatellite markers for European hazelnut (*Corylus avellana* L.) from enriched genomic libraries and usefulness in genetic diversity studies. *Tree Genetics and Genomes* 6:513-531. DOI: 10.1007/s11295-010-0269-y
- Gürcan, K., S.A. Mehlenbacher and V. Erdogan. 2010. Genetic diversity in hazelnut cultivars from Black Sea countries assessed using SSR markers. *Plant Breeding* 129:422-434. DOI: 10.1111/j.1439-0523.2009.01753.x

Mehlenbacher, S.A., D.C. Smith and R.L. McCluskey. 2011. "Jefferson" hazelnut. HortScience (submitted).

Mehlenbacher, S.A., D.C. Smith, R.L. McCluskey and M.M. Thompson. 2011. "Tonda Pacifica" hazelnut. HortScience (submitted).

Sathuvalli, V.R. 2011. Eastern filbert blight in hazelnut (*Corylus avellana*): Identification of new resistance sources and high resolution genetic and physical mapping of a resistance gene. PhD dissertation. Oregon State University, Corvallis, OR.

Sathuvalli, V.R. and S.A. Mehlenbacher. 2011. Characterization of American hazelnut (*Corylus americana*) accessions and *Corylus americana* x *Corylus avellana* hybrids using microsatellite markers. Genetic Resources and Crop Evolution DOI 10.1007/s10722-011-9743-0.

Chambers, U., V.M. Walton, and S.A. Mehlenbacher. 2011. Susceptibility of hazelnut cultivars to filbertworm, *Cydia latiferreana*. HortScience (in press).

Sathuvalli, V. S.A. Mehlenbacher and D.C. Smith. 2011. DNA markers linked to eastern filbert blight resistance from a hazelnut selection from the Republic of Georgia. J. Amer. Soc. Hort. Sci. 136: 350–357.

Mehlenbacher, S.A., R.N. Brown, E.R. Nouhra, T. Gokirmak, N.V. Bassil and T.L.

Rutgers University

T.J. MOLNAR

Refereed publications *denotes when corresponding author

Bonos, S.A., E. Watkins, J.A. Honig, M. Sasa, T.J. Molnar, J.A. Murphy, and W.A. Meyer. 2001. Breeding cool-season turfgrasses for wear tolerance using a wear simulator. International Turfgrass Society Research Journal 9:137–145.

Perdomo, P., T.J. Molnar, T.M. Ford, W.A. Meyer, and C.R. Funk. 2003. Registration of 'Secretariat' perennial ryegrass. Crop Science 43:439–440.

Bonos, S.A., W.A. Meyer, T.J. Molnar, and C.R. Funk. 2003. Registration of 'Jefferson' Kentucky bluegrass. Crop Science 43:738–739.

Bonos, S.A., T. Brentano, T.J. Molnar, W.A. Meyer, and C.R. Funk. 2004. Registration of 'Lakeshore' Kentucky bluegrass. Crop Science 44:1481–1482.

Yezhov, V.N., A.V. Smykov, V.K. Smykov, S.Y. Khokhlov, D.E. Zaurov, S.A. Mehlenbacher, T. J. Molnar*, J.C. Goffreda, and C.R. Funk. 2005. Genetic resources of temperate and subtropical fruit and nut species at the Nikita Botanical Gardens. HortScience 40:5–9.

- Mavlyanova, R.F., F.Kh. Abdullaev, P. Khodjiev, D.E. Zaurov, T.J. Molnar*, J.C. Goffreda, T.J. Orton, and C.R. Funk. 2005. Plant genetic resources and scientific activities of the Uzbek Research Institute of Plant Industry. *HortScience* 40:10–14.
- Ford, T.M., W.A. Meyer, T.J. Molnar, G. Zhang, and C.R. Funk. 2005. Registration of ‘Sonoma’ Kentucky bluegrass. *Crop Science* 45:1655–1656.
- Ford, T.M., W.A. Meyer, R.A. Bara, T.J. Molnar, and C.R. Funk. 2005. Registration of ‘Bordeaux’ Kentucky bluegrass. *Crop Science* 45:1654–1655.
- Molnar, T.J.*, S.N. Baxer, and J.C. Goffreda. 2005. Accelerated screening of hazelnut seedlings for resistance to eastern filbert blight. *HortScience* 40:1667–1669.
- Molnar, T.J.*, S.A. Mehlenbacher, D.E. Zaurov, and J.C. Goffreda. 2007. Survey of hazelnut germplasm from Russia and Crimea for response to eastern filbert blight. *HortScience* 42:51–56.
- Ibragimov, P.S., V.A. Avtonomov, A.B. Amanturdiyev, S.E. Namazov, D.E. Zaurov, T.J. Molnar*, S.W. Eisenman, T.J. Orton, and C.R. Funk. 2008. Uzbek Scientific Research Institute of Cotton Breeding and Seed Production: breeding and germplasm resources. *Journal of Cotton Science* 12:62–72.
- Abdushukur, A.K., G.M. Chernova, A.M. Rakhmonov, L.V. Nikolyyi, E. Ablaeva, D.E. Zaurov, T.J. Molnar*, S.W. Eisenman, and C.R. Funk. 2009. Genetic resources of *Pistacia vera* L. in Central Asia. *Genetic Resources and Crop Evolution* 56:429–443.
- Molnar, T.J.*, J.C. Goffreda, and C.R. Funk. 2010. Survey of *Corylus* resistance to *Anisogramma anomala* from different geographic locations. *HortScience* 45:832–836.
- Molnar, T.J.*, J. Capik, S. Zhao, N. Zhang. 2010. First report of eastern filbert blight on *Corylus avellana* ‘Gasaway’ and ‘VR20-11’ caused by *Anisogramma anomala* (Peck) E. Müller in New Jersey. *Plant Disease* 94:1265.
- Molnar, T.J.* and J.M. Capik. 2012. Eastern filbert blight susceptibility of American × European hazelnut progenies. *HortScience* 47:1412–1418.
- Capik, J.M. and T.J. Molnar*. 2012. Assessment of host (*Corylus* sp.) resistance to eastern filbert blight in New Jersey. *Journal of the American Society for Horticultural Science* 137:157–172.
- Hosseinpour, A., E. Seifi, D. Javadi, S.S. Ramezanzpour, and T.J. Molnar. 2013. Nut and kernel characteristics of twelve hazelnut cultivars grown in Iran. *Scientia Horticulturae* 150:410–413.
- Capik, J.M., M. Muehlbauer, A. Novy, J.A. Honig, and T.J. Molnar*. 2013. Eastern filbert blight resistant hazelnuts from Russia, Ukraine, and Poland. *HortScience* 48:466–473.
- Molnar, T.J., E. Walsh, J.M. Capik, V. Sathuvalli, S.A. Mehlenbacher, A.Y. Rossman, and N. Zhang. 2013. A real-time PCR assay for early detection of eastern filbert blight. *Plant Disease* 97:813–818.
- Hosseinpour, A., E. Seifi, and T.J. Molnar. 2013. Position and density of pistillate inflorescences of some hazelnut cultivars grown in Iran. *Journal of Agricultural Science* 5:135–131.

Zaurov, D.Z., T.J. Molnar*, S.W. Eisenman, T.M. Ford, R.F. Mavlyanova, J.M. Capik, C.R. Funk, and J.C. Goffreda. 2013. Genetic resources of apricots (*Prunus armeniaca* L.) in Central Asia. *HortScience* 48:681–691.

[Molnar, T.J.*, P.C. Kahn, T.M. Ford, C.J. Funk, and C. R. Funk. 2013. Tree crops, a permanent agriculture: concepts from the past for a sustainable future. *Resources* 2: 457–488](#)

Cai, G., C. Leadbetter, M. Muehlbauer, T.J. Molnar, and B.I. Hillman. 2013. Genome-wide microsatellite identification in the fungus *Anisogramma anomala* using Illumina sequencing and genome assembly. *PLoS ONE* 8(11): e82408. doi:10.1371/journal.pone.0082408

Capik, J.M. and T.J. Molnar*. 2014. Flowering and budbreak phenology of hazelnuts in New Jersey. *HortTechnology* 24:196-208

Muehlbauer, M.F., J.A. Honig, J.M. Capik, J.N. Vaiciunas, and T.J. Molnar*. 2014. Characterization of eastern filbert blight-resistant hazelnut germplasm using microsatellite markers. *Journal of the American Society for Horticultural Science*. 139:399-432

[Mattera, R., T. Molnar, and L. Struwe. 2015. *Cornus* × *elwinortonii* and *Cornus* × *rutgersensis* \(Cornaceae\), new names for two artificially produced hybrids of big-bracted dogwoods. *Phytokeys* 55:93–111](#)

Leadbetter, C.W., J.M. Capik, M. Pisetta, and T.J. Molnar*. 2015. Sources of resistance to eastern filbert blight in hazelnuts from the Republic of Georgia. *Scientia Horticulturae* 193:269–275.

Leadbetter, C.W., J.M. Capik, Mehlenbacher, S.A., and T.J. Molnar*. 2016. Hazelnut accessions from Russia and Crimea transmit resistance to eastern filbert blight. *Journal of the American Pomological Society* 70:92-109.

Muehlbauer, M.F., K. Morey, N. Zhang, B.I. Hillman, and T.J. Molnar. 2016. Characterization of genetic diversity and population structure of *Anisogramma anomala* using microsatellite markers. In preparation for submission to *Phytopathology*

Book Chapter:

Molnar, T. 2011. *Corylus* L. p. 15-48. In: C. Kole (ed.) *Wild crop relatives: genomic and breeding resources of forest trees* (Volume 10). Springer-Verlag.

Acta Horticulturae (International Society for Horticultural Science) publications:

Molnar, T.J., J.C. Goffreda, and C.R. Funk. 2005. Developing hazelnuts for the eastern United States. *Acta Hort* 68:609–617.

Letchamo, W., T.J. Molnar, and C.R. Funk. 2007. Eco-genetic variations in biological activities of sea berry (*Hippophae rhamnoides*). *Acta Hort* 756:229-243.

- Molnar, T.J., J.M. Capik, and J.C. Goffreda. 2009. Response of hazelnut progenies from known resistant parents to *Anisogramma anomala* in New Jersey, U.S.A. *Acta Hort* 845:73–81.
- Molnar, T.J. and J.M. Capik. 2012. Advances in hazelnut research in North America. *Acta Hort* 940:57–65.
- Molnar, T.J. and J.M. Capik. 2013. The Rutgers University woody ornamentals breeding program: past, present, and future. *Acta Hort* 990:271–280.
- Molnar, T.J., K. Morey and J.M. Capik. 2014. Evaluating sources of hazelnut resistance to eastern filbert blight in New Jersey, USA. *Acta Hort*. 1052:45-59
- Muehlbauer, M., T. Villani, J. Simon, H. Juliani and T. Molnar. 2016. Lipid profiles of a diverse collection of *Corylus* species and interspecific hybrids. *Acta Hort* 1109:29-33. DOI 10.17660/ActaHortic.2016.1109.5

Other non-refereed publications:

- Johnson-Cicalese, J.M., W.A. Meyer, M. Mohr, K. Plumley, and T. Molnar. 1997. Developing Kentucky bluegrass cultivars with improved resistance to billbugs. *Rutgers Turfgrass Proceedings* 29:157–176.
- Molnar, T. 2003. Persian walnuts from Uzbekistan and Kyrgyzstan. *The Nutshell*, quarterly newsletter of the Northern Nut Growers Association 57:23.
- Funk, C.R., T.J. Molnar, and W.A. Meyer. 2003. Potential of *Poa angustifolia* L. as a low- to medium-low maintenance turfgrass. *Rutgers Turfgrass Proceedings* 35:193.
- Funk, C.R., T.J. Molnar, and W.A. Meyer. 2004. Germplasm collection, evaluation, and recurrent population improvement of turfgrasses and under-utilized perennial food crops, p. 16–21. *Proceedings of the Thirteenth Annual Rutgers Turfgrass Symposium*. Center for Turfgrass Science. Cook College. Rutgers University.
- Orton, E.R. and T. Molnar. 2004. VENUS™ dogwood introduced by NJEAS/Cook College. *New Jersey Nursery and Landscape Association Newsletter* 2(4):8.
- Orton, E.R. and T.J. Molnar. 2005. Stellar® and Jersey Star® Dogwood. *American Nurseryman* 201(8):38-42.
- Funk, C.R., T. Molnar, G. Zhang, and S. Baxer. 2005. A new green revolution, p. 39. *Proceedings of the Fourteenth Annual Rutgers Turfgrass Symposium*. Center for Turfgrass Science. Cook College. Rutgers University.
- Funk, C.R., and T. Molnar. 2006. Genetic improvement of perennial plants for food, feed, fiber, timber, bioenergy, and environmental enhancement, p. 36. *Proceedings of the Fifteenth Annual Rutgers Turfgrass Symposium*. Center for Turfgrass Science. Cook College. Rutgers University.
- Molnar, T.J. and S. Baxer. 2006. Backyard breeding: hazelnuts. *The Nutshell*, quarterly newsletter of the Northern Nut Growers Association 60:12-17.

Molnar, T.J., S.N. Baxer, G. Zhang, and C.R. Funk. 2007. Role of turfgrasses and other landscape plants in reducing global warming and our addiction to fossil fuels, p. 44. Proceedings of the Sixteenth Annual Rutgers Turfgrass Symposium. Center for Turfgrass Science. School of Environmental and Biological Sciences. Rutgers University.

Capik, J. and T.J. Molnar. 2007. Chip bud layering: an easy way to produce rooted layers of hazelnuts. The Nutshell, quarterly newsletter of the Northern Nut Growers Association 61:15–18.

Molnar, T.J., S.N. Baxer, and C.R. Funk. 2008. Genetic improvement of perennial crops for a sustainable future, p. 48. Proceedings of the Seventeenth Annual Rutgers Turfgrass Symposium. Center for Turfgrass Science. School of Environmental and Biological Sciences. Rutgers University.

Molnar, T.J., D.Z. Zaurov, and C.R. Funk. 2008. Nut research and breeding at Rutgers University, p. 248–256. 2nd International Conference: Conservation and sustainable use of plant resources. Bishkek, September 11–14, 2008.

Molnar, T.J., J. Capik, D. Zaurov, E. Fargo, and C.R. Funk. 2009. Perennial plants for a sustainable future: progress and perspectives at Rutgers, p. 49–51. Proceedings of the Eighteenth Annual Rutgers Turfgrass Symposium. Center for Turfgrass Science. School of Environmental and Biological Sciences. Rutgers University.

Molnar, T.J. and M. Pisetta. 2009. Searching for resistance to eastern filbert blight: hazelnuts from the Republic of Georgia. The Nutshell, quarterly newsletter of the Northern Nut Growers Association 63(4):16–22.

Molnar, T.J., J. Capik, D. Zaurov, A. Morgan, and C.R. Funk. 2010. Hybrid hazelnut consortium: a collaborative national effort to expand hazelnut production, p. 47. Proceedings of the Nineteenth Annual Rutgers Turfgrass Symposium. Center for Turfgrass Science. School of Environmental and Biological Sciences. Rutgers University.

Inzano, M. and T.J. Molnar. 2010. The brown marmorated stink bug: A new pest of hazelnuts. The Nutshell, quarterly newsletter of the Northern Nut Growers Association 64(4):16–32.

Molnar, T.J. 2010. A new call for hazelnuts. The Nutshell, quarterly newsletter of the Northern Nut Growers Association 64(1):31–32.

Molnar, T.J. 2010. A (second) new call for hazelnuts. The Nutshell, quarterly newsletter of the Northern Nut Growers Association 64(2):12.

Molnar, T.J. 2010. Eastern filbert blight: does genetic resistance hold up across different regions? The Nutshell, quarterly newsletter of the Northern Nut Growers Association 64(2):16–24.

Molnar, T.J. and D.E. Zaurov. 2010. Persian walnut (*Juglans regia* L.) germplasm collection from Kyrgyzstan and Uzbekistan, p. 266–271. In: International Conference, Plant introduction, biodiversity conservation and plant use. The Goreev Botanical Garden of the National Academy of Science of the Kyrgyz Republic, Bishkek, Kyrgyzstan. September 7–9, 2010.

Capik, J.M. and T.J. Molnar. 2010. Breeding ornamental hazelnuts. Combined Proceedings of the International Plant Propagators' Society 60:136–146.

[Kahn, P.C., T.J. Molnar, G. Zhang, and C.R. Funk. 2011. Investing in perennial crops to sustainably feed the world. *Issues in Science and Technology*, Summer 2011: 75–81.](#)

Molnar, T.J., D.E. Zaurov, J.M. Capik, S.W. Eisenman, T. Ford, L.V. Nikolyyi, and C.R. Funk. 2011. Persian walnuts (*Juglans regia* L.) in Central Asia. Annual Report of the Northern Nut Growers Association 101:56–69.

Molnar, T.J. 2011. Nut tree research and breeding at Rutgers University. Annual Report of the Northern Nut Growers Association 101:7–113.

Molnar, T.J. 2011. Expansion of hazelnut research in North America. FAO-CIHEAM-NUCIS Newsletter, Number 15:33-37.

Capik, J. and T.J. Molnar. 2011. A call for hazelnuts revisited. The Nutshell, quarterly newsletter of the Northern Nut Growers Association 65(4):16–18.

Molnar, T.J., J. Capik, C. Leadbetter, D. Zaurov, and C. R. Funk. 2011. Progress identifying new hazelnut germplasm expressing resistance to eastern filbert blight, p. 42. Proceedings of the Nineteenth Annual Rutgers Turfgrass Symposium. Center for Turfgrass Science. School of Environmental and Biological Sciences. Rutgers University.

Molnar, T.J. and J. Capik. 2012. From turf to nuts: where have we gone in 16 years of plant breeding, p. 25–28. Proceedings of the Twenty-first Annual Rutgers Turfgrass Symposium. Center for Turfgrass Science. School of Environmental and Biological Sciences. Rutgers University.

Molnar, T.J., J.M. Capik, C.W. Leadbetter, N. Zhang, G. Cai, and B.I. Hillman. 2012. Developing hazelnuts (*Corylus* spp.) with durable resistance to eastern filbert blight caused by *Anisogramma anomala*. In: Snieszko, Richard A.; Yanchuk, Alvin D.; Kliejunas, John T.; Palmieri, Katharine M.; Alexander, Janice M.; Frankel, Susan J., (tech. coords.). Proceedings of the fourth international workshop on the genetics of host-parasite interactions in forestry: disease and insect resistance in forest trees. Gen. Tech. Rep. PSW-GTR-240. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.

Molnar, T.J. 2013. Expanding agriculture with underutilized perennial tree crops: taking a great idea and making it a reality, p. 18-19. Proceedings of the Twenty-second Annual Rutgers Turfgrass Symposium. Center for Turfgrass Science. School of Environmental and Biological Sciences. Rutgers University.

[Muehlbauer, M., J.M. Capik, and T.J. Molnar. 2013. Hazelnuts: an emerging crop for the northeast. *Horticultural News* 93:20-26.](#)

Muehlbauer, M., K. Morey, J. Capik, J. Honig, and T. Molnar. 2014. Enhancing the Evaluation of New Hazelnut Germplasm from Turkey and the Baltic Region with the Use of Molecular Tools. p. 45-46. Proceedings of the Twenty-third Annual Rutgers Turfgrass Symposium. Center for Turfgrass Science. School of Environmental and Biological Sciences. Rutgers University

Capik, J. and T. Molnar. 2014. 4-Year Flowering Study of Eastern Filbert Blight-Resistant Hazelnuts in New Jersey. Annual Report of the Northern Nut Growers Assoc. 104:21-24

[Muehlbauer, M., T. Molnar. 2014. Hazelnuts, a Potential New Crop for the Northeast: An update on the Rutgers University Breeding Program. Horticultural News 94:1-3](#)

Zaurov, D.E., Molnar, T.J., Capik, J., Nikolyi, L.V. Sardorov, M.N., Ford, T. and S.W. Eisenman. 2014. Persian walnuts (*Juglans regia* L.) in Central Asian countries: Uzbekistan, Tajikistan, Kazakhstan and Turkmenistan. pp. In: Following Walnut Footprints – Cultivation and Culture, Folk and History, Traditions and Uses, Scripta Horticulturae no. 17. International Society for Horticultural Science.

Molnar, T.J., A. Morgan, and J. Capik. 2015. Eastern filbert blight-resistant hazelnut selections: Gordon 1, Gordon 2, Gordon 3, and Gordon 4. Annual Report of the Northern Nut Growers Assoc. 105:6-12

Muehlbauer, M., J. Capik, K. Morey, J. Honig, and T. Molnar. 2015. Genetic Characterization of New Eastern Filbert Blight-Resistant Germplasm Turkey, Latvia, and Lithuania. p. 17. Proceedings of the Twenty-fourth Annual Rutgers Turfgrass Symposium. Center for Turfgrass Science. School of Environmental and Biological Sciences. Rutgers University.

Molnar, T.J., J. Capik, J.A. Honig, M. Muehlbauer, and S. Mehlenbacher. 2016. Securing and expanding the U.S. hazelnut industry through breeding for resistance to eastern filbert blight. Pg 64-67. Proceedings of the Twenty-fifth Annual Rutgers Turfgrass Symposium. Center for Turfgrass Science. School of Environmental and Biological Sciences. Rutgers University

Molnar, T.J. and J. Capik. 2016. New Eastern Filbert Blight Resistant Hazelnuts from the Republic of Georgia. Annual Report of the Northern Nut Growers Assoc. in press

Nebraska Forest Service/University of Nebraska-Lincoln

S.J. JOSIAH

Hygnstrom, S.E., Skelton, P.D., Josiah, S.J., Gilsdorf, J.A., Virchow, D.R., Brandle, J.A., Jayaprakash, A.K., Eskridge, K.M., and K.C. VerCauteren. White-tailed deer browsing and rubbing preferences for trees and shrubs that produce non-timber forest products. HortTechnology. Accepted July 2008.

Xu, Y.X., Hanna, M.A., and S.J. Josiah. 2007. Hybrid hazelnut oil characteristics and its potential oleochemical application. J. Industrial Crops and Products 26 (2007) 69-76.

Awada, T. and S. Josiah. Physiological responses of four hazelnut hybrids to water availability in Nebraska. J. Great Plains Research 17 (2). Fall 2007. pp 193-202.

Ruark, G., Josiah, S., Riemenschneider, D. and T. Volk. 2006. Perennial Crops for Bio-Fuels and Conservation, 2006 Agricultural Outlook Forum—Prospering in Rural America, Arlington VA. February, 2006.

Gold, M., Godsey, L. and S.J. Josiah. 2004. Markets and Marketing Strategies for Agroforestry Specialty Products in North America. *Agroforestry Systems*, 61:371-382. Also in: Nair PKR, Rao MR, and Buck LE (eds.) *New Vistas in Agroforestry: A Compendium for the 1st World Congress of Agroforestry*, Klewer, Dordrecht, The Netherlands (2004). 371-382.

Josiah, S.J., Brott, H. and J. Brandle. 2004. Producing Woody Floral Products in an Alleycropping System in Nebraska. *J. of HortTechnology*, April-June, 14(2):203-207

Josiah, S.J. St. Pierre, R., Brott, H. and J. Brandle. 2004. Productive Conservation: Diversifying Farm Enterprises by Producing Specialty Woody Products in Agroforestry Systems. *Journal of Sustainable Agriculture*. 23(3):93-108.

M.A. HANNA

Fernando, S., and M.A. Hanna. 2005. Phase behavior of the ethanol-biodiesel-diesel microemulsion system. *Transactions of the ASAE* 48(3):903-908.

Fernando, S., and M.A. Hanna. 2005. Design and development of a threshing chamber and pneumatic conveying and cleaning units for soybean harvesting. *Transactions of the ASAE* 48(5):1681-1688.

Ganjyal, G., M.A. Hanna and D.S.K. Devadattam. 2005. Processing of sapota (sapodilla): Powdering. *Journal of Food Technology* 3(3):326-330.

Guan, J.J., and M.A. Hanna. 2005. Selected morphological and functional properties of extruded acetylated starch-poly(lactic acid) foams. *Industrial Engineering and Chemistry Research* 44(9):3106-3115.

Guan, J., K. Eskridge and M. A. Hanna. 2005. Acetylated starch-poly(lactic acid) loose-fill packaging materials. *Industrial Crops and Products* 22(2):109-123.

Hanna, M.A., L. Isom and J. Campbell. 2005. Biodiesel: Current Perspectives and Future. *Journal of Scientific and Industrial Research*. 64(11):854-857.

Mesquita, C.M., M.A. Hanna and N.P. Costa. 2005. New harvesting device for soybeans. *Transactions of the ASAE* 48(1):55-62.

Mesquita, C.M., M.A. Hanna and N.P. Costa. 2005. Self-propelled prototype soybean harvester. *Transactions of the ASAE* 48(4):1301-1310.

Seker, M., and M.A. Hanna. 2005. Cross-linking starch at various moisture contents by phosphate substitution in an extruder. *Carbohydrate Polymers* 59:541-544.

Wang, L., G.M. Ganjyal, D.D. Jones, C.L. Weller and M.A. Hanna. 2005. Modeling of bubble growth dynamics and non-isothermal expansion in starch-based foams during extrusion. *Advances in Polymer Technology* 24(1):29-45.

- Xu, Y., Y. Dzenis and M.A. Hanna. 2005. Water solubility, thermal characteristics and biodegradability of extruded starch acetate foams. *Industrial Crops and Products* 21(3):361-368.
- Xu, Y. and M. Hanna. 2005. Physical, mechanical and morphological characteristics of extruded starch acetate foam. *Journal of Polymers and the Environment*. 13(3): 221-230.
- Xu, Y. and M.A. Hanna. 2005. Preparation and properties of biodegradable foams form starch acetate and poly(tetremethylene adipate-co-terephthalate). *Carbohydrate Polymers* 59(4):521-529.
- Xu, Y., K. Kim, M.A. Hanna and D. Nag. 2005. Chitosan-starch composite films preparation and characterization. *Industrial Crops and Products* 21:185-192.
- Xu, Y., V. Miladinov and M. A. Hanna. 2005. Starch acetate-maleate mixed ester synthesis and characterization. *Cereal Chemistry* 82(3):336-340.
- Xu, Y., J. Zhou, and M. A. Hanna. 2005. Melt-intercalated starch acetate nanocomposite foams as affected by type of organoclay. *Cereal Chemistry* 82(1):105-110.
- Zhou, J. and M.A. Hanna. 2005. Effects of the properties of blowing agents on processing and performance of extruded starch acetate. *Journal of Applied Polymer Science* 97:1880-1890.
- Ganjyal, G., S. Panuwat, M.A. Hanna, A. Noomhorm and D. Jones. 2006. Modeling extrusion of rice flour and rice starch by neural networks. *Cereal Chemistry* 83(3):223-227.
- Guan, J.J. and M.A. Hanna. 2006. Selected morphological and functional properties of extruded starch cellulose foams. *Bioresource Technology* 97:1716-1726.
- Guan, J.J. and M.A. Hanna. 2006. Physical, mechanical and macromolecular properties of starch acetate during extrusion foaming transformations. *Industrial Engineering and Chemistry Research*. 45(11):3991-4000.
- Hanna, M., J. Guan and Y. Xu. 2006. Starch-based biodegradable packaging. (Chapter). *Encyclopedia of Agricultural, Food and Biological Engineering*
- Kim, K.M., J.A. Ko, J.S. Lee, H.J. Park and M.A. Hanna. 2006. Effect of modified atmosphere packaging on the shelf life of coated, whole and sliced mushrooms. *Lebensmittel-Wissenschaft und Technologie*. 39:364-371.
- Kim, K.M., C.L. Weller and M.A. Hanna. 2006. Properties of chitosan films as a function of pH and solvent type. *Journal of Food Science* 3: E119-E124.
- Kumar, A., G.M. Ganjyal, D.D. Jones and M.A. Hanna. 2006. Digital image processing for measurement of residence time distribution in a laboratory extruder. *Journal of Food Process Engineering* 75:237-244.
- Mesquita, C.M., M.A. Hanna and N.P. Costa. 2006. Crop and harvesting characteristics affecting field losses and physical qualities of soybeans - Part I. *Applied Engineering in Agriculture* 22(3):325-333.

- MpagaliE, J., R. Weber and M. A. Hanna. 2006. Design and testing of a solar photovoltaic operated multi-seeds oil press. *Renewable Energy* 31:1855-1866.
- Seker, M. and M.A. Hanna. 2006. Sodium hydroxide and trimetaphosphate levels affect properties of starch extrudates. *Industrial Crops and Products* 23(3):249-255.
- Wang, L., D. D. Jones, C.L. Weller and M. A. Hanna. 2006. Modeling of transport phenomena and melting kinetics of starch in a co-rotating twin screw extruder. *Advances in Polymer Technology* 25(1)1-19.
- Xu, Y., and M. A. Hanna. 2006. Electrospray encapsulation of water-soluble protein with polylactide. Effects of formulations on encapsulation efficiency and release. *International Journal of Pharmaceutics* 320 (1-2): 30-36.
- Xu, Y., M. Skotak, and M.A. Hanna. 2006. Electrospray encapsulation of water-soluble protein with polylactide. Effects of formulations and process on morphology and particle size. *Journal of Microencapsulation* 23(1):69-78.
- Xu, Y., X. Ren and M.A.Hanna. 2006. Chitosan/clay nanocomposite film preparation and characterization. *Journal of Applied Polymer Science*. 99:1684-1691.
- Fernando, S. and M.A. Hanna. 2007. Lubricity characteristics of selected vegetable oils, animal fats and their derivatives. *Journal of Applied Engineering* 23(1): 5-11.
- Ganjyal, G., Q. Fang and M.A. Hanna. 2007. Freezing points and small-scale deicing tests for salts of levulinic acid made from grain sorghum. *Bioresource Technology* 98(15): 2814-2818.
- Ganjyal, G., R Weber and M.A. Hanna. 2007. Laboratory composting of extruded starch acetate and polylactic acid blended foams. *Bioresource Technology* 98: 3176-3179.
- Kumar, A., G.M. Ganjyal, D.D. Jones and M.A. Hanna. 2007. Modeling residence time distribution in a twin-screw extruder as a series of ideal steady-state flow reactors. *Journal of Food Engineering* 84:441-448.
- Kumar, A., G.M. Ganjyal, D.D. Jones and M.A. Hanna. 2007. Experimental determination of longitudinal expansion during extrusion of starches. *Cereal Chemistry* 84(5): 480-484.
- Lee, S.Y., Y Xu., and M.A. Hanna. 2007. Tapioca starch–polylactic acid-based nanocomposite foams as affected by type of organo clay. *International Polymer Processing* 22(5): 429-435.
- Mesquita, C.M., R. Weber, M.A. Hanna and N.P. Costa. 2007. Crop and harvesting characteristics affecting physiological qualities of soybeans - Part II. *Journal of Applied Engineering* 23(4): 433-438.
- Mpagalile J. H, M.A. Hanna and R. Weber. 2007. Seed oil extraction using a solar powered screw press. *Industrial Crops and Products* 25: 101-107.
- Xu, Y., and M.A. Hanna. 2007. Effect of eggshell powder as nucleating agent on the structure, morphology and functional properties of normal corn starch foams. *Packaging Science and Technology* 20:165-172.

- Xu, Y., and M.A. Hanna. 2007. Synthesis and characterization of tripolyphosphate (TPP) cross-linked chitosan capsules using electrospraying technique. *Journal of Microencapsulation* 24(2): 143-151.
- Yixiang Xu, Milford A. Hanna, and Josiah, Scott. (2007). Hybrid hazelnut oil characteristics and its potential oleochemical application. *Industrial Crops and Products* 26, 69-76.
- Bullerman, L., A. Bianchini, L.S. Jackson, J. Jablonski, M.A. Hanna and D. Ryu. 2008. Reduction of Fumonisin B1 in Corn Grits by Single-Screw Extrusion. *Journal of Agricultural and Food Chemistry*. 56(7): 2400-2405.
- Kumar, A., L. Wang, Y. Dzenis, D. Jones, and M.A. Hanna. 2008. Thermogravimetric characterization of corn stover as gasification and pyrolysis feedstock. *Biomass and Bioenergy*. 32:460-467.
- Lee, S. and M.A. Hanna. 2008. Effects of extrusion variables on organoclay intercalation and properties of tapioca starch-poly (lactic acid) nanocomposite foams. *International Polymer Processing*. Submitted.
- Lee, S. Y., H. Chen and M.A. Hanna. 2008. Preparation and characterization of tapioca-starch-poly (lactic acid) nanocomposite foams by melt intercalation based on clay type. *Industrial Crops and Products*, 28: 95-106.
- Lee, S. Y., and M. A. Hanna. 2008. Tapioca-starch-poly (lactic acid)—Cloisite 30B nanocomposite foams. *Polymer Composites*. In press.
- Pushpadass, H.A., D.B. Marx and M. A. Hanna. 2008. Effects of extrusions temperature and plasticizers on the physical and functional properties of starch films. *Starch Journal*. Accepted.
- Pushpadass, H.A., R.W. Weber, and M.A. Hanna. 2008. Expansion, morphological, and mechanical properties of starch-polystyrene foams containing various additives. In press.
- Pushpadass, H.A., Marx, D.B., R.L. Wehling and M. A. Hanna. 2008. Extrusion and characterization of starch films. *Cereal Chemistry*. Accepted.
- Pushpadass, H.A., G. Suresh Babu, R.W. Weber and M.A. Hanna. 2008. Extrusion of starch-based loose-fill packaging foams: Effects of temperature, moisture and talc on physical properties. *Packaging Tech and Sci*. 21: 171-183.
- Yixiang Xu, Milford A. Hanna. (2009). Synthesis and characterization of hazelnut oil-based biodiesel. *Industrial Crops and Products* 29(2-3), 473-479.
- Yixiang Xu, Milford A. Hanna (2009) Synthesis and characterization of hazelnut oil-based biodiesel., *Industrial Crops and Products*, 29 (2-3), 473-479.
- Yixiang Xu, Milford A. Hanna. (2010). Nutritional quality and oxidative stability of oil extracted from hybrid hazelnuts. *International Journal of Food Science and Technology* 45(11), 2329-2336.
- Yixiang Xu, Milford A. Hanna. (2010). Evaluation of Nebraska hybrid hazelnuts: nut and kernel characteristics, proximate, oil and protein compositions. *Industrial Crops and Products* 31(1), 84-91.

Yixiang Xu, Andrea Bianchini, Milford A. Hanna. (2011). Evaluation of Mold and Mycotoxin Contaminations in Hybrid Hazelnuts Grown in Nebraska. *Journal of Food Processing and Technology*, 2, 5.

Yixiang Xu, Milford A. Hanna (2011) Nutritional and anti-nutritional compositions of defatted Nebraska hybrid hazelnut meal. *International Journal of Food Science and Technology*, 46, 2022-2029.

Yixiang Xu, Edward Sismour, John Parry, Milford Hanna, Haiwen Li (2012) Chemical composition and antioxidant activity in hazelnut shells from US-grown cultivars. *International Journal of Food Science and Technology*, 47(5), 940-946.