BIOGRAPHICAL SKETCH

Scott H. Brainard
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Latest version of this CV

(a) Research & Professional Experience

2023 – present	USDA-AFRI Postdoctoral Fellow, University of Wisconsin–Madison
2018 – present	Tree Crop Breeder, Savanna Institute
2021 – 2023	Postdoctoral Research Associate, University of Wisconsin–Madison

(b) Education & Training

University of Wisconsin	Madison, WI	Horticulture	Ph.D, 2021
Wageningen University	Wageningen, NL	Plant Science	M.Sc. *cum laude*, 2016

(c) Publications

Most closely related

1. **Scott H. Brainard**, Dean M. Sanders, Tomas Bruna, Shu Shengqiang, Julie C. Dawson, The first two chromosome-scale genome assemblies of American hazelnut enable comparative genomic analysis of the genus Corylus, *Plant Biotechnology Journal* **22**, 472-483 (2024). https://doi.org/10.1111/pbi.14199.
2. **Scott H. Brainard**, Jason A. Fischbach, Lois C. Braun, Julie C. Dawson, Improving selection efficiency in C. americana × C. avellana interspecific hybrids through the development of an indel-based genetic map, *Acta Horticulturae* **Accepted** (2023). https://doi.org/10.1101/2023.02.05.527175.
3. Andrey Vega-Alfaro, **Scott H. Brainard**, Irwin L. Goldman, Linkage mapping of root shape traits associated with market class in two carrot populations, *G3* (2024).
4. Andrey Vega-Alfaro, **Scott H. Brainard**, Irwin L. Goldman, QTL mapping utilizing $F_{2:3}$ linkage mapping populations reveals regions of chromosomes 2 and 6 are significantly associated with root width in carrot, *Acta Horticulturae* **Under review** (2023).
5. Katharina Wigg, **Scott H. Brainard**, Nicholas Metz, Kevin Dorn, Irwin L. Goldman, Novel QTL associated with Rhizoctonia solani Kühn resistance identified in two table beet x sugar beet $F_{2:3}$ populations using a new table beet reference genome, *Crop Science* **63**, 535-555 (2023). https://doi.org/10.1002/csc2.20865.
6. **Scott H. Brainard**, Shelby L. Ellison, Philipp W. Simon, Julie C. Dawson, Irwin L. Goldman, Genetic characterization of carrot root shape and size using genome-wide association analysis and genomic-estimated breeding values, *Theoretical and Applied Genetics* **135**, 605-622 (2022). https://doi.org/10.1007/s00122-021-03988-8.
7. **Scott H. Brainard**, Julian A. Bustamante, Julie C. Dawson, Edgar P. Spalding, Irwin L. Goldman, A digital image-based phenotyping platform for analyzing root shape attributes in carrot, *Frontiers in Plant Science* **12** (2021). https://doi.org/10.3389/fpls.2021.690031.

Other significant publications

7. Irwin L. Goldman, Andrey Vega-Alfaro, **Scott H. Brainard**, Cecilia McGregor, Madeline Oravec, Esther van der Knaap, Yanbing Wan, Form and contour: Breeding and genetics of organ shape from wild relatives to modern vegetable crops, *Frontiers in Plant Science* **14** (2023). https://doi.org/10.3389/fpls.2023.1257707.
8. **Scott H. Brainard**, Kevin J. Wolz, Keefe Keeley, Adrian Rodrigues, Francois-Jerome Selosse, Overcoming Bottlenecks in the Midwest Hazelnut Industry: An Impact Investment Plan, *Savanna Institute Report* (2019). https://www.savannainstitute.org/hazelnut-impact-investment-report/.
9. **Scott H. Brainard**, The impact of Indonesian agricultural policies on indigenous populations, natural resources and the economy, *U. Miami Inter-Am L. Rev* **43**, 165–193 (2011). http://www.jstor.org/stable/23339450.

(d) Invited Talks (last five years)

1. *Improving the efficiency of selecting for nut traits using genomic data*. 10th International Hazelnut Congress. Corvallis, Oregon. September 6, 2022.
2. *Development of improved inter-specific hazelnut varieties for the Upper Midwestern United States*. 6th European Agroforestry Conference. Nuoru, Sardinia. May 16, 2022.
3. *Improving the efficiency of selecting for nut traits using genomic data* (Daucus carota *subsp.* sativus). Upper Midwest Hazelnut Development Initiative - Annual Conference. La Crosse, WI. March 5, 2022.
4. *The genetic control of market class in carrot* (Daucus carota *subsp.* sativus). Plant Animal Genome Conference XXIX. Virtual conference. January 8, 2022.
5. *First chromosome-scale genome assemblies for Corylus americana*. Plant Animal Genome Conference XXIX. Virtual conference. January 8, 2022.
6. *Improving the efficiency of hazelnut breeding using genomic data*. North American Agroforestry Conference. Virtual conference. July 1, 2021.
7. *Improving the efficiency of hazelnut breeding using genetic information*. Upper Midwest Hazelnut Development Initiative - Annual Conference. Virtual conference. March 5, 2021.
8. *Launching the Midwest Hazelnut Industry*. Northern Nut Growers Association - Annual Meeting. Iowa City, IA. July 28, 2019.
9. *Prospects and Bottlenecks in the Midwestern Hazelnut Industry*. Upper Midwest Hazelnut Development Initiative - Annual Conference. Eau Claire, WI. March 9, 2019.
10. *Using digital image-based phenotyping to investigate the genetic bases of root shape and market class in carrot*. Vegetable Breeding Institute. Ithaca, NY. August 27, 2018.
11. *Using digital image-based phenotyping to investigate the genetic bases of root shape and market class in carrot*. 39th International Carrot Conference. Madison, WI. August 23, 2018.

(e) Professional organizations

1. National Association of Plant Breeders, 2021–present
2. International Society for Horticultural Science, 2022–present

(f) Synergistic Activities

1. Reviewer for *Frontiers in Ecology and Evolution*, *Plant Breeding Reviews*, *Plant Methods*, *Frontiers in Genetics*, *Acta Horticulturae*, *Plant Genetic Resources*
2. Lecturer in graduate-level courses for students in the Plant Breeding and Plant Genetics Program at the University of Wisconsin–Madison
3. Mentoring of graduate students in Horticulture (6) and Chemistry (1) PhD programs
4. Co-Chair of 'Scaling Agroforestry–Nurseries and Germplasm Develoment' Working Group