

## BIOGRAPHICAL SKETCH

### Scott H. Brainard

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### (a) Education & Training

University of Wisconsin	Madison, WI	Plant Breeding	Ph.D, 2021
Wageningen University	Wageningen, NL	Plant Science	M.Sc. <i>cum laude</i> , 2014
Swarthmore College	Swarthmore, PA	Philosophy	B.A., 2009

### (b) Research & Professional Experience

2021 – present Postdoctoral Researcher, University of Wisconsin–Madison  
2018 – present Research Fellow, Savanna Institute

### (c) Publications

#### *Most closely related*

1. Brainard, S. H., Bustamante, J. A., Dawson, J. C., Spalding, E. P., and Goldman, I. L. (2021a). A digital image-based phenotyping platform for analyzing root shape attributes in carrot. *Frontiers in Plant Science*, 12:1171.
2. Brainard, S. H., Ellison, S. L., Simon, P. W., Dawson, J. C., and Goldman, I. L. (2021b). Genetic characterization of carrot root shape and size using genome-wide association analysis and genomic-estimated breeding values. *Theoretical and Applied Genetics*.

#### *Other significant publications*

3. Brainard, S. H. (2011). The impact of Indonesian agricultural policies on indigenous populations, natural resources and the economy. *U. Miami Inter-Am L. Rev.*, 43(1):165–193.
4. Brainard, S. H., Wolz, K. J., Keeley, K., Rodrigues, A., and Selosse, F.-J. (2019). Overcoming Bottlenecks in the Midwest Hazelnut Industry: An Impact Investment Plan. <https://www.savannainstitute.org/hazelnut-impact-investment-report/>.

### (d) Invited Talks

1. *Improving the efficiency of hazelnut breeding using genomic data*. North American Agroforestry Conference. Virtual conference. July 1, 2021.
2. *Improving the efficiency of hazelnut breeding using genetic information*. Upper Midwest Hazelnut Development Initiative - Annual Conference. Virtual conference. March 5, 2021.
3. *Jump Starting a Midwest Hazelnut Industry*. Savanna Institute - Perennial Farm Gathering. Hazel Green, WI. December 7, 2019.
4. *Launching the Midwest Hazelnut Industry*. Northern Nut Growers Association - Annual Meeting. Iowa City, IA. July 28, 2019.
5. *Prospects and Bottlenecks in the Midwestern Hazelnut Industry*. Upper Midwest Hazelnut Development Initiative - Annual Conference. Eau Claire, WI. March 9, 2019.

6. *Using digital image-based phenotyping to investigating the genetic bases of root shape and market class in carrot.* Vegetable Breeding Institute. Ithaca, NY. August 27, 2018.
7. *Using digital image-based phenotyping to investigating the genetic bases of root shape and market class in carrot.* 39th International Carrot Conference. Madison, WI. August 23, 2018.

**(e) Synergistic Activities**

1. Reviewer for Frontiers in Ecology And Evolution, Plant Breeding Reviews
2. Instructor for graduate-level courses in plant breeding and plant genetics: “Genetic Mapping” and “Selection Theory”
3. Mentor of graduate students in Horticulture and Chemistry PhD programs
4. Development of Java application for pre-processing Illumina sequence data:  
<https://github.com/shbrainard/gbsTools>

**(f) Selected funding**

1. Ekhagastitelsen (Co PI), 2017–2020 - *Market Class Genetics and the Development of Improved Carrot Germplasm for Organic Production Systems* - \$162,000
2. USDA-CGC (Co PI), 2019–2020 - *Digital Root Phenotyping and Genotyping of the USDA-NPGS Carrot Collection* - \$27,500
3. Arnold Arboretum Jewett Prize (Co PI), 2020–2021 - *De novo assembly of a draft genome for the American hazelnut (Corylus americana)* - \$10,000
4. Wisconsin Specialty Crop Block Grant Program (Co PI), 2022–2023 - *Breeding Cold Hardy Chestnuts for Wisconsin* - \$81,000