

# JULIA PIASKOWSKI

Biosketch

[LinkedIn](#) | [GitHub](#) | [Personal Website](#) | [Ag Stats Website](#)

## EDUCATION

PhD (2012)	Washington State University, Pullman, WA	Plant Breeding/Crop Science Minor: Statistics
MS (2006)	Washington State University, Pullman, WA	Plant Breeding/Crop Science
BS (2001)	University of Idaho, Moscow, ID	Microbiology, Biochemistry & Molecular Biology. Minor: Chemistry

## APPOINTMENTS (Post-PHD)

March 2023 - Present	<b>Director of Statistical Programs.</b> University of Idaho, College of Agriculture and Life Sciences.
Augu 2018 – Feb 2023	<b>Statistical Consultant.</b> University of Idaho, College of Agriculture and Life Sciences – Statistical Programs.
July 2014 – July 2018	<b>Postdoctoral Associate in Research.</b> Washington State University, Department of Horticulture and Department of Crop & Soil Sciences (multiple appointments)
July 2012 - June 2013	<b>Research Associate</b> Washington State University, Department of Crop & Soil Sciences and USDA-ARS, Western Regional Plant Introduction Station.

## PEER-REVIEWED PUBLICATIONS

- Guo Y, Epperson B, Heimbuch M, Jepsen S, Shaw C, Wootton M, Van Buren J, Nasados JA, Piaskowski J, Bass PD, and MJ Colle. 2024. Hot carcass fabrication intervention for managing top round quality in heavy weight beef carcasses. *Meat and Muscle Biology*. In Press. <https://doi.org/10.22175/mmb.17769>.
- Hollinshead VRBB, Piaskowski JL, and Y Chen. Low vitamin D concentration is associated with increased depression risk in adults 20–44 Years Old, an NHANES 2007–2018 data analysis with a focus on perinatal and breastfeeding status. *Nutrients* 2024, 16, 1876. <https://doi.org/10.3390/nu16121876>. [GitHub link](#).
- Uhdre R, Coyne CJ, Bourland B, Piaskowski J, Zheng P, Ganjyal GM, Zhang Z, McGee R, Main D, Bandillo N, Morales M, Ma Y, Chengci C, Franck W, Thrash A and ML Warburton. 2024. Association study of crude seed protein and fat concentration in a USDA pea diversity panel. *The Plant Genome*. <https://doi.org/10.1002/tpg2.20485>.
- Salem, H.M.; Schott, L.R.; Piaskowski, J.; Chapagain, A.; Yost, J.L.; Brooks, E.; Kahl, K.; Johnson-Maynard, J. Evaluating Intra-Field Spatial Variability for Nutrient Management Zone Delineation through Geospatial Techniques and Multivariate Analysis. *Sustainability* 2024, 16, 645. <https://doi.org/10.3390/su16020645>
- Christie H. Guetling CH, Jones LC, Strand EK, Morishita DW, Piaskowski J and TS Prather. 2023 Susceptibility models and habitat typing of two invasive *Hieracium* species in the Greater Yellowstone Ecosystem. *Biological Invasions*. DOI: <https://doi.org/10.1007/s10530-023-03037-z>
- Adhikari, S., I.C. Burke, J. Piaskowski, and S.D. Eigenbrode. 2021. Phenotypic trait variations in populations of a global invader mayweed chamomile (*Anthemis cotula*): implications for weed management. *Frontiers in Agronomy*. doi: <https://doi.org/10.33202/189/fagro.2021.662375>
- Adhikari, S., I.C. Burke, S.R. Revolinski, J. Piaskowski, and S.D. Eigenbrode. 2021. Within-Population Trait Variation in a Globally Invasive Plant Species Mayweed Chamomile (*Anthemis cotula*): Implications for Future Invasion and Management. *Frontiers in Agronomy* 3: 3. doi: [10.3389/fagro.2021.640208](https://doi.org/10.3389/fagro.2021.640208).
- Heron T, Strawn DG, Dobre M, Cade-Menum BJ, Deval C, Brook E, Piaskowski J, Gasch C, and A Crump (2020). “[Soil phosphorus speciation and availability in meadows and forests in alpine lake watersheds with different parent materials](#)”. *Frontiers in Forests and Global Change*. DOI: 10.3389/ffgc.2020.604200
- Ewers, T, S Nash, A Ruth, and JL Piaskowski (2020). “[Lesson Plans Help Volunteers Improve Learning among 4-H Youths in Animal Projects](#).” *Journal of Extension* 58(3): v58-3rb3.
- Hardner CM, Hayes BJ, Kumar S, Vanderzande S, Cai L, Piaskowski J, Quero-Garcia J, Campoy JA, Barreneche T, Giovannini D, Liverani A, Charlot G, Villamil-Castro M, Oraguzie N, and C Peace (2019). “[Prediction of Genetic](#)

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- [Value for Sweet Cherry Fruit Maturity among Environments Using a 6K SNP Array.](#)” *Horticulture Research* 6(6). DOI: 10.1038/s41438-018-0081-7.
- Mugabe D, Coyne CJ, Piaskowski J, Zheng P, Ma Y, Landry E, McGee R, Main D, Vandemark G, Zhang H and S Abbo (2019). “[QTL analysis of cold tolerance in chickpea.](#)” *Crop Science* 59(w). DOI: 10.2135/cropsci2018.08.0504
- Piaskowski JL, Hardner C, Cai L, Zhao Y, Iezzoni I and C Peace (2018). [Genomic heritability estimates in sweet cherry indicate non-additive genetic variance is relevant for industry-prioritized traits.](#) *BMC Genetics* 19(23). DOI: 10.1186/s12863-018-0609-8
- Vanderzande S, Piaskowski J, Luo F, Edge-Garza D, Klipfel J, Schaller A, Martin S and C Peace (2018). [Crossing the finish line: How to develop diagnostic DNA tests as breeding tools after QTL discovery.](#) *Journal of Horticulture* 5(1). DOI: 10.4172/2376-0354.1000228.
- Piaskowski J, Murphy KM, and SS Jones (2017). [Perennial wheat lines have highly admixed population structure and elevated rates of outcrossing.](#) *Euphytica* (213):171. DOI: 10.1007/s10681-017-1961-x.
- Piaskowski J, Brown, D and KG Campbell (2016). [NIR calibration of soluble stem carbohydrates for predicting drought tolerance in spring wheat.](#) *Agronomy Journal*. DOI:10.2134/agronj2015.0173.
- Piaskowski J, Weddell B, Fuerst EP, Roberts D and LA Carpenter-Boggs (2013). [Building supportive networks among agricultural innovators through a symposium on dryland organic farming.](#) *Journal of Extension*, (6FEA6).

### OTHER PRESENTATIONS AND REPORTS

- Piaskowski J (2024) Coefficient of Variation and Variety Testing Field Trials [Talk]. Conference on Applied Statistics in Agriculture and Natural Resources. May 13-16, 2004, Ames, IA.
- Galvin, E., Tay, J., & J. Piaskowski, (2023) [R Packages for Curating Agricultural Data Sets](#) [Talk]. ASA, CSSA, SSSA International Annual Meeting, Oct 29 – Nov 1, St. Louis, MO.
- Piaskowski, J. L., Galvin, E., Marshall, J., Schroeder, K. L., Walsh, O. S., Finkelnburg, D., Davis, J. B., Graebner, R., Neely, C. B., & Jones, S. S. (2023) [Tools and Computing Infrastructure for a Wheat Variety Testing Datahub](#) [Abstract]. ASA, CSSA, SSSA International Annual Meeting, Oct 29 – Nov 1, St. Louis, MO.
- Piaskowski, J (2022). [Using Git: Tales of Peril, Pain and Protection](#) [Talk]. Annual Meeting of the ASA-CSSA-SSSA, Nov 6-10, 2022 (Baltimore, MD).
- Piaskowski, J (2022). [Finding the R Resources You Need for Agricultural Research](#) [Poster]. Annual Meeting of the ASA-CSSA-SSSA, Nov 6-10, 2022 (Baltimore, MD).
- Piaskowski, J (2022). [Mixed Models in R: Mind the Gap. Presentation](#) for the Annual NCCC-170 Meeting (2022/06/16).
- Piaskowski, J and W Price (2022). [Tools and Resources for R users in Agricultural Research](#) [Poster]. Agricultural Statistics Conference, May 16 – 19, 2022 (Logan, Utah).
- Piaskowski J and W Price (2021). The Role of the Statistician in Reproducible Research [Talk]. Conference on Applied Statistics in Agriculture and Natural Resources, May 17 – 20, 2021 (online).
- Piaskowski J. Routine Incorporation of Spatial Covariates into Analysis of Planned Field Experiments [Talk]. University of Idaho Soil & Water seminar, April 8, 2021.
- Piaskowski J (2021). Variety Testing DataHub [Talk]. Annual meeting of SCC-33, March 3, 2020 (online).
- Piaskowski J, Marshall J, Hinds J, Schroeder K, and O Walsh (2020). A Public Database for Idaho Variety Testing Programs [Poster]. Annual Meeting of the ASA-CSSA-SSSA (Online).
- Piaskowski J, Jackson C, Marshall J and W Price (2019). Incorporating Spatial Statistics into Routine Analysis of Agricultural Field Trials [Speed Talk & Poster]. Joint Statistical Meeting. Denver, CO
- Piaskowski J, Hardner C and C Peace (2018). PREDICT: a tool for predicting progeny distribution in new crosses for multiple correlated traits [Poster]. Plant and Animal Genome XXVI. San Diego, CA.
- Hardner CM, Peace C, Hayes B, Kumar S, Piaskowski J, Vanderzande S, Castro MV, Cai L, Oraguzie N, Quero-García J, Barreneche T, Campoy J, Charlot G, Giovannini D, Liverani A, Gasic K, Byrne DH, Worthington M, Da Silva Linge C, Wünsch A and AF Iezzoni (2017). Environmental stability of genomic predictions of cherry and peach performance using models of large effect QTL and genetic background effects. Annual Meeting of the American Society of Horticultural Sciences. Waikoloa, HI.
- Main D, Humann JL, Frank M, Piaskowski J, Jung S, Cheng C-H, Lee T, Scott K, Zheng P, Flores M, Saha S, Mueller L, Gmitter F and A Abbott (2017). Citrus Genome Database: Resources that enable basic, translational, and applied research. Annual Meeting of the American Society of Horticultural Sciences. Waikoloa, HI.

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- Piaskowski J, Hardner CM, Cai L, Zhao Y, Iezzoni AF and C Peace (2017). [Cross Assist: on online tool for predicting progeny distribution in a new cross for multiple correlated traits in sweet cherry](#) [Poster]. Annual Meeting of the National Association of Plant Breeders. Davis, CA.
- Piaskowski J, Humann JL, Main D, Jung S, Cheng C-H, Lee T, Frank M, Scott K, Flores-Gonzales M, Saha S, Mueller L, Abbott AG and FD Gmitter (2017). Citrus Genome Database (CGD): A Resource for Genomics, Genetics, and Breeding Research [Poster]. Plant and Animal Genome XXV. San Diego, CA.
- Peace C, Piaskowski J, Sandefur P, Powell A, Luo F, Edge-Garza DA, Rowland TV, Johnson CR, Cai L, Antanaviciute L and SC Vanderzande (2016). DNA test cards: Delivering trait predictive discoveries to breeders. American Society for Horticultural Science, Atlanta, GA.
- Hardner C, Vanderzande SC, Cai L, Piaskowski J, Oraguzie N, Quero-García J, Campoy JA, Barreneche T, Wünsch A, Giovannini D, Liverani A, Sotiropoulos T, Kazantzis D, Kumar S, Hayes, B, and CP Peace (2016). Using SNP arrays to leverage historic data sets for improved prediction accuracy and estimation of GxE of fruit maturity in sweet cherry. RGC8: 8th International Rosaceae Genomics Conference, Angers, France.
- Peace C, Edge-Garza DA, Rowland TV, Ru S, Piaskowski J, Vanderzande SC, and P Sandefur (2016). From QTLs to routine DNA-informed breeding: prospects, advances, and needs. RGC8: 8th International Rosaceae Genomics Conference, Angers, France.
- Piaskowski J and C Peace (2016). Cross Assist v2.0 – what can it do for your breeding program and how should RosBREED improve on it? Presentation at Annual RosBREED Participant meeting. East Lansing, MI.
- Piaskowski J, Edge-Garza DA and C Peace (2015). [Quick Start Guide to DNA Tests](#).
- Piaskowski J, Murphy KM and SS Jones (2015) Cytogenetic characterization of perennial wheat lines. Poster. Annual Meeting of the ASA-CSSA-SSSA. Minneapolis, MN.
- Piaskowski JL, Sandefur P, Coe M and C Peace (2015). An Extension-based approach to integrating DNA information into Rosaceae breeding programs: the importance of preaching to the choir. Annual Meeting of the National Association of Plant Breeders. Pullman, WA.
- Piaskowski J, Olmstead MA and D Main (2013). Creation of the Growers' Toolbox: A Decision-Making Toolkit for New Plantings of Apple, Cherry and Peach. Annual Meeting of the Washington State Horticulture Association. Wenatchee, WA.
- McGee RJ, Coyne C, Piaskowski J, Vandermark G, Zhang H and S Abbo. Screening for winter hardiness in a cultivated chickpea/wild relative RIL population. Annual Meetings of the ASA-CSSA-SSSA. Cincinnati, OH. Nov 2012.
- Piaskowski J and KG Campbell. The Use of Stem Reserve Carbohydrates to Predict Wheat Yield Under Drought. Western Society of Crop Science Annual Meetings. Pullman, WA. Nov 2012.
- Piaskowski J and LA Carpenter-Boggs. 2012. Marketing Opportunities for Dryland Organic Crops. 2012 Dryland Field Day Abstracts: Highlights of Research Progress. Technical Report 12. Washington State University.
- Piaskowski J and KG Campbell. 2012. Phosphorus Use Efficiency in Washington Spring Wheat. 2012 Dryland Field Day Abstracts: Highlights of Research Progress. Technical Report 12. Washington State University.
- Piaskowski J, Hoagland C and KG Campbell. Cultivar Variation in Spring Wheat Inoculated with Arbuscular Mycorrhizal Fungi. ASA-CSSA-SSSA Annual Meetings. Long Beach, CA. Nov 2010.

## TEACHING, TRAININGS AND WORKSHOPS

- Workshop/Short Course: [Introduction to Scientific Programming in R](#). University of Idaho, Spring, 2024 (in person)
- Workshop/Short Course: [Introduction to Scientific Programming in R](#). University of Idaho, Spring, 2023 (online).
- Workshop/Short Course: [What They Forgot to Teach You About R](#). University of Idaho, Spring, 2022 (online).
- Introduction to Linkage Mapping (Guest Lecturer). University of Idaho, December 7 & 10, 2021 (online).
- Spatial Recipes for Field Trials (Workshop). ASA-CSSA-SSSA Annual Meeting, November 7, 2021 (Salt Lake City, Utah).
- Invited Talk: [Adventures in Baby Sitting: Web Scraping for the Python and HTML Novice](#), Pycascades Conference, February 08, 2020 (Portland, OR). Workshop repeated for University of Idaho Python Club February 27, 2020 (Moscow, Idaho).
- Guest Lecturer on Data Visualization for 6<sup>th</sup> graders at Palouse Prairie Charter School (Feb 18, 2020, Moscow, ID)
- Workshop: Introduction to the Tidyverse, October 2, 2019 (Moscow, ID)
- Workshop: Applied ANOVA in R, June 7, 2019 (Aberdeen, ID)

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- Workshop: Applied ANOVA in R, June 6, 2019 (Twin Falls, ID)
- Guest Lecture: Estimating Heritability using R Packages and Tools, May 2, 2019 (online)
- Workshop: Creating Awesome Plots with ggplot2, April 11, 2019 (online)
- Workshop: Introduction to Data Cleaning with the Tidyverse, April 4, 2019 (online)
- Workshop: Applied ANOVA in R, March 28, 2019 (online)
- Workshop: Introduction to R, February 28, 2019 (Moscow, ID and online)
- Workshop: Writing Faster R code, March 27, 2019 (Moscow, ID)
- Seminar: Avoid Bias When Estimating Relatedness with Genomic Data, November 13, 2018, UI Statistics Seminar (Moscow, ID)
- Workshop: Introduction to R, October 3, 2018 (Aberdeen, ID)
- Workshop: Introduction to R, October 2, 2018, (Twin Falls, ID)
- Seminar: Speeding Up Your R Code, September 19, 2018 (Pullman, WA)
- Estimating DNA Allele Effects with Asreml, May 31, 2018 (Pullman, WA)
- Workshop: Crash Course in R, May 21, 2018 (Pullman, WA)
- Co-taught Hort 202: Crop Growth and Development, Spring, 2014 & 2015 (Washington State University)
- Co-taught Hort 503: Bioinformatics for Researchers, Fall, 2013 (Washington State University)

### ONLINE TOOLS CREATED OR MAINTAINED

- [Mixed Models CRAN Task View](#) (deployed 2022/10): co-maintainer
- [Agricultural CRAN Task View](#) (deployed 2022/09): lead maintainer
- [WAVE](#): Western Agricultural Variety Explorer and associated tools (deployed 2022/06): Project Director
- [agstats.io](#), statistical resources for agricultural scientists (deployed 2021/11, regularly updated)
- R/shiny app: [Idaho Wheat Variety Testing Explorer](#) (deployed 2020/06, substantially updated 2021/06)
- R/Online book: [Incorporating Spatial Analysis into Agricultural Field Experiments](#) (deployed 2019/07)
- R/Shiny app: [Cherry GEBV XplorR](#) (deployed August 2017, last updated 2017/09)
- R/Shiny app: [Multi-trait Sweet Cherry Crossing Simulator](#) (deployed 2017/07, last updated 2017/08)
- R/Shiny app: [Selection Simulator for 3 Correlated Traits](#): Teaching tool for selection across multiple traits (deployed 2016/06, last updated 2017/10)
- Co-managed Rosbreed website 2015-2018 ([www.rosbreed.org](http://www.rosbreed.org))
- Curated data for the Citrus Genome Database 2013 -2014 (<https://www.citrusgenomedb.org>)

### OUTREACH PRESENTATIONS

- [Getting data to the industry: Using the WAVE variety trial data hub to understand falling number](#). Pacific Northwest Wheat Quality Council annual meeting (Coeur d'Alene, Idaho). January 25, 2023.
- WAVE: Western Agricultural Variety Explorer. Presentation at [Ag Talk Tuesday](#) (online). June 21, 2022.
- Pacific Northwest Variety Testing DataHub. Presentation to the U.S. Dry Pea & Lentil Council (online). September 2, 2021.
- Idaho Wheat Variety Testing Database, an update. Presentation to the Idaho Wheat Commission (Moscow, ID). June 7, 2021.
- Idaho Wheat Variety Testing Database Proposal. Presentation to the Idaho Wheat Commission (online). June 16, 2020.
- Precision parent selection tool for the WSU apple breeding program. Presentation to the Washington Tree Fruit Research Commission in Pasco, WA. January 12, 2018.
- Current status of cherry and apple genetics research in RosBREED. Presentation made to RosBREED International Partners' Meeting. San Diego, CA. January 22, 2018.
- Adventures in Cherry Geneticizing. Presentation on implementing genomic selection using sweet cherry as an example. Presentation to Driscoll's in Watsonville, CA. December 21, 2016.
- Enabling DNA-informed breeding in the private small berry breeding industry. Presentations given at Driscoll's, Pacific Berry Breeding and Plant Sciences, Inc. in Watsonville, CA. September 13 – 15, 2016.
- Status of field trial findings and research needs in phosphorus use efficiency. Update to Advisory Board for the Pacific Northwest Dryland Organic Cropping System Project. February 2011.
- Overview of field trials for phosphorus use efficiency. Aeschliman No-till Farm. International Exchange on the Palouse (tour for farmers from New Zealand and Germany who practice direct seeding). June 24, 2010.

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- Overview of field trials for wheat-mycorrhizal associations. WSU Field Day for Organic Cropping Systems on the Palouse. June 16, 2010.

### FELLOWSHIPS & GRANTS

- 2024-2025 Idaho Barley Commission: "Phone App and Online Public Database of Barley Variety Testing Trials", J Piaskowski.
- 2021-2025 NIFA Grant (proposal #2020-08868): "FACT: Field Crop Variety Data Hub for Information Access and Knowledge Discovery Using Historical and Current Trial Data." J Piaskowski, J Hinds, JB Davis, R Graebner, SS Jones, J Marshall, C Neely, K Schroeder, S Van Vleet and O Walsh.
- 2020-2021 Idaho Wheat Commission Grant: "Access to Idaho Extension Variety Trial wheat data: Creating searchable database for producers and wheat breeders." J Piaskowski, J Marshall, J Hinds, O Walsh and K Schroeder
- 2015-2016 BioAg Grant Recipient: "The Search for Acid-Tolerant Rhizobia." LA Carpenter-Boggs, RJ McGee, and G Vandemark.
- 2011 CROPP Cooperative/Organic Valley Farmers Advocating for Organics Grant Recipient: Additional Funds for the Conference Proposal for Dryland Organic Agriculture in the Pacific Northwest
- USDA OREI 2011 Grant Recipient: Conference Proposal for Dryland Organic Agriculture in the Pacific Northwest: Addressing Constraints to Production, Economics, and Sustainability
- 2010: Washington State University Goldworthy Research Scholarship
- 2008-2009 BioAg Grant Recipient: Evaluation of Wheat Varieties for Mutualism with Endomycorrhizal Fungi to Improve Phosphorus Uptake
- Fall, 2005: Graduate School Travel Grant, WSU
- 2005-2006: Graduate Research Fellowship, The Land Institute, Salina, KS

### SERVICE

- Section Leader, Biometry & Statistical Computing, American Society of Agronomy (2024)
- Planning Committee for the Conference on Applied Statistics in Agriculture and Natural Resources (2023 - Present)
- Ag Hackathon Chair/Organizer, American Society of Agronomy (2023)
- Served on NIFA grant panels (2021, 2022, 2023)
- Vice Leader of Biometry & Statistical Computing of the American Society of Agronomy (2023)
- Community Leader of the Statistical Education Community of the American Society of Agronomy (2020-2021)
- Member of NCCC-170 (Agricultural Statistics)
- Member of SCC-33 (Variety Testing)
- Idaho Center for Agriculture and Food Education (CAFE) Scientific Advisory Board Member (Fall, 2019 to Fall, 2021)
- Data Science Task Force member to develop a data science certificate at University of Idaho (Spring, 2020)
- Peer Review Editor: Agronomy Journal, Crop Science, G3, Horticulture Research, PLOS One, Biometrics
- GxE Journal Club Organizer/Leader (Fall, 2017)
- Organized Conference on Dryland Organic Agriculture in the Pacific Northwest. November 11, 2011. Yakima, WA
- Board of Directors: Washington Sustainable Food & Farming Network. March, 2006 – March, 2009.

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### PROFESSIONAL MEMERSHIPS

- American Statistical Association
- Agronomy Society of America
- Crop Science Society of America
- Soil Science Society of America
- Data Carpentries certified instructor

### AWARDS

- 2021 American Society of Agronomy President's Award (shared among all NCCC-170 members)
- 1<sup>st</sup> place: Graduate Student Oral Presentation Competition, Western Society of Crop Science Annual Meeting. Pullman, WA 2012.
- 3<sup>rd</sup> place: Organic Management Systems Graduate Student Poster Competition, ASA-CSSA-SSSA Annual Meetings. San Antonio, TX, 2011.

### SKILLS

- Programming:
  1. R & RStudio (advanced/expert), R/shiny (advanced), ggplotting (advanced)
  2. SAS (intermediate)
  3. Python (beginner/intermediate)
  4. C (beginner/intermediate)
  5. SQL (beginner/intermediate)
- Programming tools
  1. git, GitHub & GitLab (intermediate/advanced)
  2. Jupyter Notebook (proficient), Rmarkdown/Quarto (advanced)
- Web Frameworks
  1. Hugo (intermediate/advanced)
  2. Quarto (intermediate/advanced)
  3. Wordpress (intermediate)
- Statistics: general and generalized linear mixed models (advanced), regularization (advanced), machine learning (intermediate), deep learning including large language models (intermediate), time series (intermediate), Bayesian (intermediate), spatial models (intermediate), survey methods (beginner), categorical analysis (intermediate)