



Science  
Societies

# 2022 Journal Outstanding Paper Awards

October 17, 2022



PUBLICATIONS

# 2022 Journal Outstanding Paper Awards

Each year, ASA, CSSA, and SSSA, and its journals recognize outstanding journal papers with annual awards presented at the ASA, CSSA, and SSSA International Annual Meeting. Following are this year's winners.

### Society Awards

Articles published during the preceding two years are considered for the current year's award (e.g., articles from 2020 and 2021 are considered for the 2022 award). In general, the selection is based on evaluation of how the article has advanced knowledge in the profession, the effectiveness of communication, and its originality and impact.

#### ASA Society Award Winner

"Corn Nitrogen Rate Recommendation Tools' Performance Across Eight US Midwest Corn Belt States" by Curtis J. Ransom, Newell R. Kitchen, James J. Camberato, Paul R. Carter, Richard B. Ferguson, Fabián G. Fernández, David W. Franzen et al. See <https://doi.org/10.1002/agj2.20035>



Curtis Ransom

#### SSSA Society Award Winner

"Soil Health Recovery After Grassland Reestablishment on Cropland: The Effects of Time and Topographic Position" by Mriganka De, Jason A. Repel, Larry J. Chick, Michael Lawrinenko, Rebecca Baldwin-Odrick, Steven J. Hall, and Marshall D. McDaniel. See <https://doi.org/10.1002/saj2.20007>



Mriganka De

#### CSSA Society Award Winner

"Diversity and Heterotic Patterns in North American Proprietary Maize Germplasm" by Michael R. White, Mark A. Mikel, Natalia de Leon, and Shawn M. Kaeppler. See <https://doi.org/10.1002/csc2.20050>



Michael White



Mark Mikel



Natalia de Leon



Shawn Kaeppler

### Journal Outstanding Paper Awards

As with the Society Outstanding Paper awards, articles that are eligible for the Journal Outstanding Paper Awards are published during the preceding two years. The articles undergo a selection process based on evaluation of how the article has advanced knowledge in the profession, the effectiveness of communication, and its methodology, originality, and impact.

#### Agricultural & Environmental Letters

"Systems with Greater Perenniality and Crop Diversity Enhance Soil Biological Health" by Christine D. Sprunger, Tvisha Martin, and Meredith Mann. See <https://doi.org/10.1002/ael2.20030>



Christine Sprunger

### Agrosystems, Geosciences & Environment

“An Evaluation of Biological Soil Health Indicators in Four Long-Term Continuous Agroecosystems in Canada” by Lumarie Pérez-Guzmán, Lori A. Phillips, Brent J. Seuradge, Ikechukwu Agomoh, Craig F. Drury, and Verónica Acosta-Martínez. See <https://doi.org/10.1002/agg2.20164>



Lori Phillips

### Crop, Forage & Turfgrass Management

Applied Turfgrass Science Section: “The Influence of Water pH on Efficacy of Fungicides for Turf Disease Control” by Trevor Stacy and Richard Latin. See <https://doi.org/10.1002/cft2.20007>



Richard Latin

Crop Management Section: “Comparing the Agronomic Performance of Short-Season and Commonly Grown Corn Hybrid Maturities in Ohio” by Alexander J. Lindsey, Richard Minyo, Allen B. Geyer, and Peter R. Thomison. See <https://doi.org/10.1002/cft2.20019>

Forage and Grazinglands Section:

“Harvest Interval Effects on the Persistence and Productivity of Alfalfa Grown as a Monoculture or in Mixtures in the Southeastern United States” by Marcia P. Quinby, Renata L. G. Nave, Gary E. Bates, and David McIntosh. See <https://doi.org/10.1002/cft2.20018>



Alexander Lindsey



Renata Nave Oakes

### Journal of Environmental Quality

“Biogeochemical and Climate Drivers of Wetland Phosphorus and Nitrogen Release: Implications for Nutrient Legacies and Eutrophication Risk”



Helen Jarvie

by Helen P. Jarvie, Denise W. Pallett, Stefanie M. Schäfer, Merrin L. Macrae, Michael J. Bowes, Philip Farrand, and Alan C. Warwick et al. See <https://doi.org/10.1002/jeq2.20155>

### Natural Sciences Education

“Student and Instructor Perceptions of Engagement After the Rapid Online Transition of Teaching Due to COVID-19” by Kristen A. Walker and Katherine E. Koralesky. See <https://doi.org/10.1002/nse2.20038>



Kristen Walker

### The Plant Genome

“Natural Variation for Carotenoids in Fresh Kernels Is Controlled by Uncommon Variants in Sweet Corn” by Matheus Baseggio, Matthew Murray, Maria Magallanes-Lundback, Nicholas Kaczmar, James Chamness, Edward S. Buckler, Margaret E. Smith et al. See <https://doi.org/10.1002/tpg2.20008>



Matheus Baseggio

### The Plant Phenome Journal

“Optimization of UAS-Based High-Throughput Phenotyping to Estimate Plant Health and Grain Yield in Sorghum” by Giovanni Galli, David W. Horne, S. Delroy Collins, Jinha Jung, Anjin Chang, Roberto Fritsche-Neto, and William L. Rooney. See <https://doi.org/10.1002/ppj2.20010>



David Horne



Giovanni Galli

### Urban Agriculture & Regional Food Systems

“Food Safety Considerations of Urban Agroforestry Systems Grown in Contaminated Environments” by Olga Romanova and Sarah Lovell. See <https://doi.org/10.1002/uar2.20008>



Olga Romanova

**Vadose Zone Journal**

“Simulation of Spatial Variability in Crop Leaf Area Index and Yield Using Agroecosystem Modeling and Geophysics-Based Quantitative Soil Information” by C. Brogi, J. A. Huisman, M. Herbst, L. Weihermüller, A. Klosterhalfen, C. Montzka, T. G. Reichenau et al. See <https://doi.org/10.1002/vzj2.20009>



Cosimo Brogi

**Society Division Paper Awards**

Most CSSA divisions award outstanding papers annually from papers published in *Crop Science*. Division awards are chosen from all articles published in the preceding calendar year with selection based on appropriate scientific merit in their topic areas.

The Soil and Water Management and Conservation (S06) Division of SSSA honors the authors of *Soil Science Society of America Journal* (SSSAJ) manuscripts published within the Soil and Water Management and Conservation Division of SSSAJ during the last seven years that have had exceptional impact on the scientific community. Selection is based on a rigorous evaluation of how the manuscript has advanced knowledge in the profession, the effectiveness of communication, originality, and impact measured by number of citations and downloads.

**Crop Science Crop Breeding and Genetics (C01) Winners**

To be determined.

**Crop Science Crop Breeding and Genetics (C01) Honorable Mentions**

To be determined.

**Crop Science Crop Physiology and Metabolism (C02) Winners**

“Effects of Elevated CO<sub>2</sub> and Warmer Temperature on Early Season Field-Grown Cotton in High-Input Systems” by Katrina J. Broughton, Michael P. Bange, Jeffrey T. Baker, Charles Yates, Daniel K.Y. Tan, David T. Tissue, and Paxton Payton. See <https://doi.org/10.1002/csc2.20313>



Katrina Broughton

**Crop Science Crop Ecology, Management, and Quality (C03) Winners**

“Genotype-Specific Nitrogen Uptake Dynamics and Fertilizer Management Explain Contrasting Wheat Protein Concentration” by Romulo P. Lollato, Brent R. Jaenisch, and Sergio R. Silva. See <https://doi.org/10.1002/csc2.20442>

“Effect of Tillers on Corn Yield: Exploring Trait Plasticity Potential in Unpredictable Environments” by Rachel L. Veenstra, Carlos D. Messina, Dan Berning, Lucas A. Haag, Paul Carter, Trevor J. Hefley, P.V. Vara Prasad et al. See <https://doi.org/10.1002/csc2.20576>



Rachel Veenstra

“Maximizing Soybean Yield by Understanding Planting Date, Maturity Group, and Seeding Rate Interactions in North Carolina” by Tristan C. Morris, Rachel A. Vann, Josh Heitman, Guy D. Collins, and Ryan W. Heiniger. See <https://doi.org/10.1002/csc2.20603>

**Crop Science Seed Physiology, Production, & Technology (C04) Winners**

“Quantitative Trait Locus Mapping for Resistance to Heat-Induced Seed Degradation and Low Seed Phytic Acid in Soybean” by Jason D. Gillman, Kranthi Chebolu, and James R. Smith. See <https://doi.org/10.1002/csc2.20419>



Jason Gillman

**Crop Science Turfgrass Science (C05) Winners**

“Global DNA Methylation Predicts Epigenetic Reprogramming and Transgenerational Plasticity in *Poa annua* L.” by Christopher W. Benson, Qing Mao, and David R. Huff. See <https://doi.org/10.1002/csc2.20337>



Christopher Benson

### Crop Science Forage and Grazinglands (C06) Winners

To be determined.

### Crop Science Genomics, Molecular Genetics, and Biotechnology (C07) Winners

“*Rsg1.a3*: A New Allele Conferring Unique Resistance to Greenbug Biotype H at the *Rsg1* Locus in *Hordeum vulgare* ssp. *spontaneum*” by Xiangyang Xu, Dolores W. Mornhinweg, Guihua Bai, Brian Steffenson, Ruolin Bian, Genqiao Li, and Amy Bernardo. See <https://doi.org/10.1002/csc2.20581>



Xiangyang Xu

### Crop Science Plant Genetic Resources (C08) Winners

“Seedbank Seeds for the Study of Environmentally Induced Transgenerational Epigenetic Variability: A Case Study of Barley” by Tommaso Martinelli, Floriana Gavazzi, Iride Mascheretti, Dario Panzeri, Andreas Börner, and Massimiliano Lauria. See <https://doi.org/10.1002/csc2.20351>



Tommaso Martinelli

“Characterization and Pre-Breeding of Diverse Alfalfa Wild Relatives Originating from Drought-Stressed Environments” by Alan W. Humphries, Carlos Ovalle, Steve Hughes,



Massimiliano Lauria



Alan Humphries

Alejandro del Pozo, Luis Inostroza, Viviana Barahona, Linqing Yu et al. See <https://doi.org/10.1002/csc2.20274>

“A Global Resource for Exploring and Exploiting Genetic Variation in Sorghum Crop Wild Relatives” by Emma S. Mace, Alan W. Cruickshank, Yongfu Tao, Colleen H. Hunt, and David R. Jordan. See <https://doi.org/10.1002/csc2.20332>



Emma Mace

### Crop Science Crops for Nutrition and Health (C09) Winners

“The Potential to Breed a Low-Protein Maize for Protein-Restricted Diets” by Matthew S. Woore, Sherry A. Flint-Garcia, and James B. Holland. See <https://doi.org/10.1002/csc2.20600>

### Soil Science Society of America Journal Soil and Water Management and Conservation (S06) Winners

To be determined.

For a list of all past Outstanding Papers of the Year across all journals and divisions, please see our Outstanding Papers of the Year virtual issue at <https://bit.ly/3EWOLkF>. For more information on other publications awards, please refer to: [www.agronomy.org/publications/awards](http://www.agronomy.org/publications/awards).

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Did you know that ASA publishes a magazine for practitioners (CCAs, CPSS, etc.)? If you want to get your research disseminated down to the farm level quickly, consider a submission to *Crops & Soils* magazine. It's a great opportunity, particularly for graduate students and early career members, to publish in a highly impactful, international magazine. Email [cropsandsoils@sciencesocieties.org](mailto:cropsandsoils@sciencesocieties.org) for more information.

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