



**Science
Societies**

2024 Journal Outstanding Paper Awards

November 1, 2024

NOVEMBER 2024



csa news

Thirty Years in the DIRT

Tracking the Controls of Soil Organic Matter in Forest Ecosystems

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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 2022 and 2023 are considered for the 2024 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

"Soybean Yield Response to Sulfur and Nitrogen Additions Across Diverse U.S. Environments" by Keren Brooks, Spyridon Mourtzinis, Shawn P. Conley, Mark S. Reiter, John Gaska, David Lee Holshouser, Trent Irby, Jonathan Kleinjan, Carrie Knott, Chad Lee, Laura Lindsey, Seth Naeve, Jeremy Ross, Maninder Pal Singh, Rachel Vann, and Emma Matcham. See

<https://doi.org/10.1002/agj2.21216>

SSSA Society Award Winner

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Moore, Dav

<https://doi.org/10.1002/agj2.21216>

CSSA Society Award Winners



Keren Brooks



Isabel Christy



Carlos Messina

Original Research: “Sustained Improvement in Tolerance to Water Deficit Accompanies Maize Yield Increase in Temperate Environments” by Carlos Messina, Ignacio Antonio Ciampitti, Dan Berning, Dave Bubeck, Graeme Hammer, and Mark Cooper. See <https://doi.org/10.1002/csc2.20781>



Arron Carter

Review: “Unoccupied Aerial Systems Imagery for Phenotyping in Cotton, Maize, Soybean, and Wheat Breeding” by Andrew W. Herr, Alper Adak, Matthew E. Carroll, Dinakaran Elango, Soumyashree Kar, Changying Li, Sarah E. Jones, Arron H. Carter, Seth C. Murray, Andrew Paterson, Sindhuja Sankaran, Arti Singh, and Asheesh K. Singh. See <https://doi.org/10.1002/csc2.21028>

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.

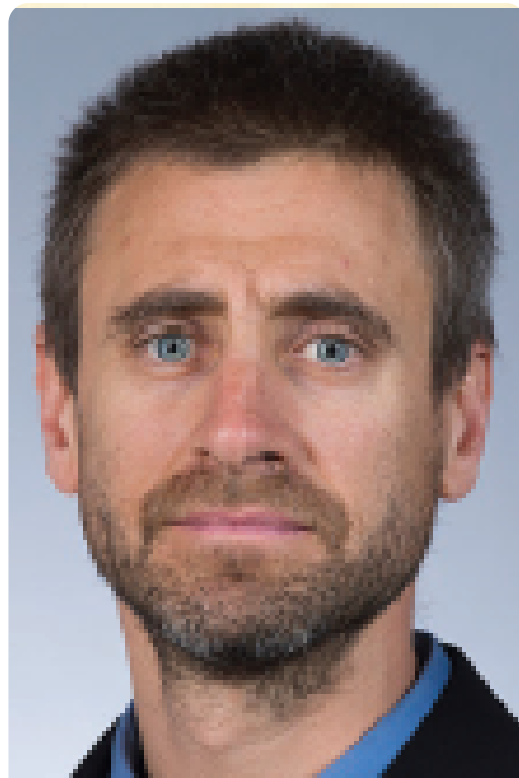
Agricultural & Environmental Letters

Research Letter: “How Can We Estimate Optimum Fertilizer Rates With Accuracy and Precision?” by Fernando E. Miguez and Hanna Poffenbarger. See

<https://doi.org/10.1002/ael2.20075>



Joby Czarnecki



Fernando Miguez

Commentary: “The Problem With Open Geospatial Data for OnFarm Research” by Joby M. Prince Czarnecki and Mary Ann Jones. See

<https://doi.org/10.1002/ael2.20062>

Agrosystems, Geosciences & Environment

"Phosphorus and Potassium Mineralization as Affected by Phosphorus Levels and Soil Types Under Laboratory Condition" by Nabin Rawal, Keshab Raj Pande, Renuka Shrestha, and Shree Prasad Vista. See

<https://doi.org/10.1002/agg2.20229>

Crop, Forage & Turfgrass Management



Michael Carlson

Crop Management Section: "Corn and Soybean Planting Order Decisions Impact Farm Gross Revenue," by Spyridon Mourtzinis and Shawn P. Conley. See



Nabin Rawal

Applied Turfgrass Science Section: "A Review of Precision Management for Golf Course Turfgrass," by Michael G. Carlson, Roch E. Gaussoin, and Laila A. Puntel. See <https://doi.org/10.1002/cft2.20183>



Spyridon Mourtzinis

Shawn Conley

<https://doi.org/10.1002/cft2.20242>

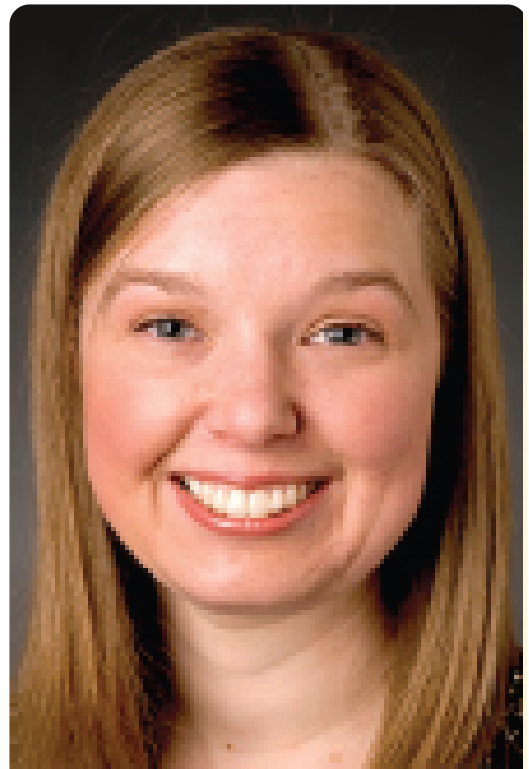


Jerry Cherney

Forage and Grazinglands Section

:“Evaluation of a Handheld NIRS Instrument for Determining Haylage Dry Matter,” by J. H. Cherney, D. J. R. Cherney, and M. F. Digman. See <https://doi.org/10.1002/cft2.20239>

Journal of Environmental Quality



Heather Preisendanz

“Impacts of the COVID-19 Pandemic on Pharmaceuticals in Wastewater Treated for Beneficial Reuse: Two Case Studies in Central Pennsylvania” by Kathryn R. Hayden, Matthew Jones, Kyle R. Elkin, Michael J. Shreve, William Irvin Clees II, Shirley Clark, Michael L.

Mashtare, Tamie L. Veith, Herschel A. Elliott,

John E. Watson, Justin Silverman, Thomas L. Richard, Andrew F. Read, and Heather E. Preisendanz. See <https://doi.org/10.1002/jeq2.20398>

Journal of Plant Registrations



Joshua Havill

“Registration of seven powdery mildew-
resistant wild hop germplasm lines” by
Joshua S. Havill, Michele S. Wiseman, John A.
Henning, David H. Gent, and Gary J.
Muehlbauer. See

<https://doi.org/10.1002/plr2.20255>

Natural Sciences Education

“Soil



Eric Brevik

Science Education: A Multinational Look at
Current Perspectives” by Eric C. Brevik, Maja
Krzic, Cristine Muggler, Damien Field,
Jacqueline Hannam, and Yoshi Uchida. See

<https://doi.org/10.1002/nse2.20077>

The Plant Genome



Rupesh Gaire

Original Research: “Multi-Trait Genomic Selection Can Increase Selection Accuracy for Deoxynivalenol Accumulation Resulting From Fusarium Head Blight in Wheat” by Rupesh Gaire, Marcio Pais de Arruda, Mohsen Mohammadi, Gina Brown-Guedira, Frederic L. Kolb, and Jessica Rutkoski. See <https://doi.org/10.1002/tpg2.20188>

Review: “The Economics and Policy of Genome Editing in Crop Improvement” by Nicholas Kalaitzandonakes, Christopher Willig, Kenneth Zahringer. See <https://doi.org/10.1002/tpg2.20248>

The Plant Phenome Journal



**Nicholas
Kalaitzandonakes**



Eric Rodene

“A UAV-Based High-Throughput Phenotyping Approach to Assess Time-Series Nitrogen Responses and Identify Trait-Associated Genetic Components in Maize” by Eric Rodene, Gen Xu, Semra Palali Delen, Xia Zhao, Christine Smith, Yufeng Ge, James Schnable, and Jinliang Yang. See

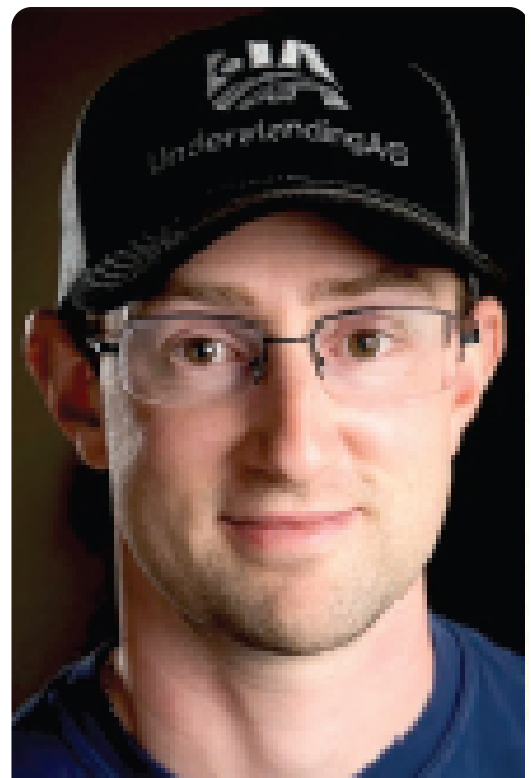
<https://doi.org/10.1002/ppj2.20030>

Urban Agriculture & Regional Food Systems

“Leaf Mold Compost Reduces Waste, Improves Soil and Microbial Properties, and Increases Tomato Productivity” by Kyle Richardville, Dan Egel, Andrew Flachs, Amit Jaiswal, Dan Perkins, Aaron Thompson, and Lori Hoagland. See

<https://doi.org/10.1002/uar2.20022>

Vadose Zone Journal



Kyle Richardville



Jannis Groh

"Same Soil, Different Climate: Crop Model Intercomparison on Translocated Lysimeters" by Jannis Groh, Efstathios Diamantopoulos, Xiaohong Duan, Frank Ewert, Florian Heinlein, Michael Herbst, Maja Holbak, Bahareh Kamali, Kurt-Christian Kersebaum, Matthias Kuhnert, Claas Nendel, Eckart Priesack, Jörg Steidl, Michael Sommer, Thomas Pütz, Jan Vanderborght, Harry Vereecken, Evelyn Wallor, Tobias K. D. Weber, Martin Wegehenkel, Lutz Weihermüller, and Horst H. Gerke. See <https://doi.org/10.1002/vzj2.20202>

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.

Crop Science Crop Breeding and Genetics (C01) Winners



Clayton N. Carley

“Using Machine Learning Enabled Phenotyping to Characterize Nodulation in Three Early Vegetative Stages in Soybean” by Clayton N. Carley, Melinda J. Zubrod, Somak Dutta, and Asheesh K. Singh. See <https://doi.org/10.1002/csc2.20861>

“Reducing the Generation Time In Winter Wheat Cultivars Using Speed Breeding” by Adam Schoen, Sydney Wallace, Meghan Fisher Holbert, Gina Brown-Guidera, Stephen Harrison, Paul Murphy, Nicholas Sanantonio, David Van Sanford, Richard Boyles, Mohamed Mergoum, Nidhi Rawat, and Vijay Tiwari. See <https://doi.org/10.1002/csc2.20989>

"Multivariate Genomic Selection Models Improve Prediction Accuracy of Agronomic Traits in Soft Red Winter Wheat" by Zachary J. Winn, Dylan L. Larkin, Dennis N. Lozada, Noah DeWitt, Gina Brown-Guedira, and Richard Esten Mason. See

<https://doi.org/10.1002/csc2.20994>

"Calibration of the Crop Growth Model APSIM for 15 Publicly Available Corn Hybrids in North America" by Cassandra Anne Winn, Sotirios Archontoulis, and Jode Edwards. See

<https://doi.org/10.1002/csc2.20857>



Adam Schoen



Zachary Winn

"A

Null Allele of the Polyphenol Oxidase Gene *Ppo?A1* in Hexaploid Wheat Originates From Tetraploid Wheat" by Akiko Nakamaru, Keita Kato, Sachiko Ikenaga, and Toshiki Nakamura. See

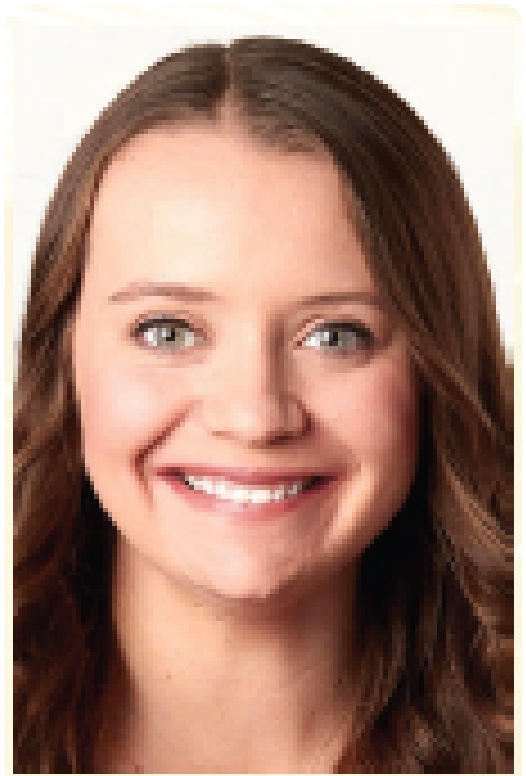
<https://doi.org/10.1002/csc2.21075>

Crop Science Crop Breeding and Genetics (C01) Honorable Mentions

"Identification of Adapted Breeding Lines to Improve Barley Hybrids for Spain" by Miriam FernándezCalleja, Christophe Boutin, Emmanuelle Dyrszka, Yann Manès, Jochen C. Reif, Yusheng Zhao, Nieves Aparicio, Francisco J. Ciudad, Ana M. Casas, and Ernesto Igartua. See <https://doi.org/10.1002/csc2.20858>



Akiko Nakamaru



Cassandra Winn

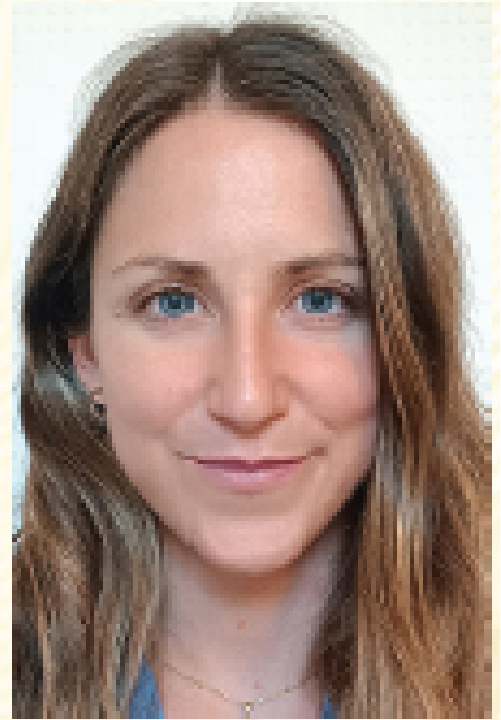
"Agronomic and Quality Impact of a Shortened Translocation for *Wheat Streak Mosaic Virus* Resistance" by Mary J. Guttieri, Robert L. Bowden, Guorong Zhang, Scott Haley, Katherine Frels, Gary L. Hein, and Katherine W. Jordan. See <https://doi.org/10.1002/csc2.20876>

“Reciprocal Recurrent Selection Based on Genetic Complementation: An Efficient Way to Build Heterosis in Diploids Due to Directional Dominance” by Giovanni Covarrubias-Pazaran, Christian Werner, and Dorcus Gemenet. See

<https://doi.org/10.1002/csc2.21018>



Mary J. Guttieri



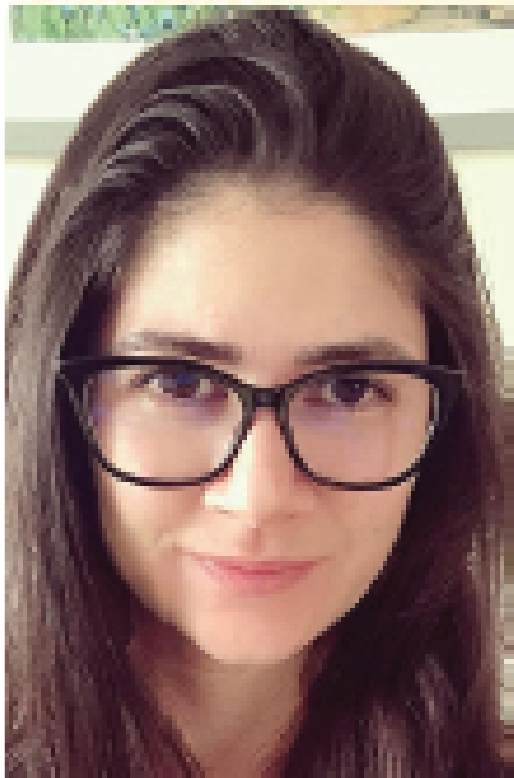
**Miriam
Fernández-Calleja**

“Multitrait Selection in Seedless Grape Hybrids in Semiarid Regions of Brazil” by Jullyanna Nair de Carvalho, Pollyanna Aparecida de Carvalho, Rafael Pio, Maria Angélica Guimarães Barbosa, and Patrícia Coelho de Souza Leão. See

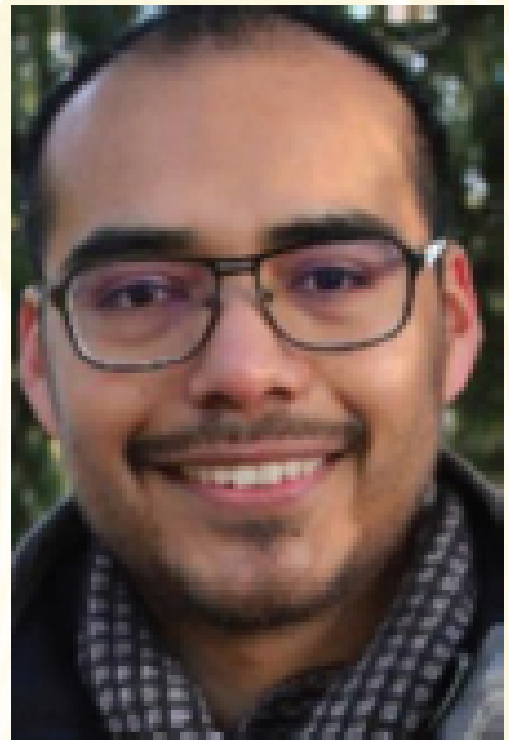
<https://doi.org/10.1002/csc2.20990>

"Analysis of Repeated Measures Data Through Mixed Models: An Application in *Theobroma grandiflorum* Breeding" by Saulo F. S. Chaves, Rodrigo S. Alves, Luiz A. S. Dias, Rafael M. Alves, Kaio O. G. Dias, and Jeniffer S. P. C. Evangelista. See

<https://doi.org/10.1002/csc2.20995>



Jullyanna Carvalho



**Giovanny
Covarrubias-Pazaran**

Crop Science Crop Physiology and Metabolism (CO₂) Winners

"Shade Tolerance Response of Legumes in Terms of Biomass Accumulation, Leaf Photosynthesis, and Chlorophyll Pigment Under Reduced Sunlight" by Mathada

Rangappa Umesh, Sangamesh Angadi, Sultan

Begna, Prasanna Gowda, and P. V. Vara Prasad. See <https://doi.org/10.1002/csc2.20851>

Crop Science Turfgrass Science (C05)

Winners



William Errickson

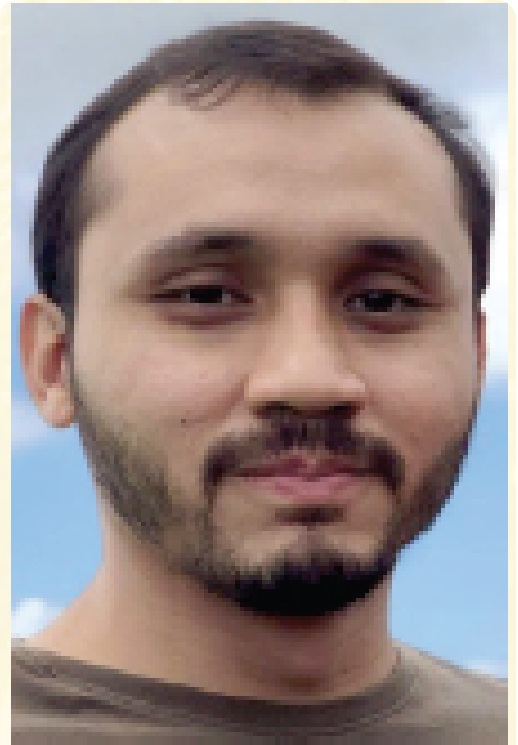
"Promotive Effects of Endophytic

Rhizobacteria on Tiller and Root Growth in

Creeping Bentgrass During Drought Stress and Post-Stress Recovery Involving

Regulation of Hormone and Sugar Metabolism" by William Errickson, Ning Zhang, and

Bingru Huang. See <https://doi.org/10.1002/csc2.21017>



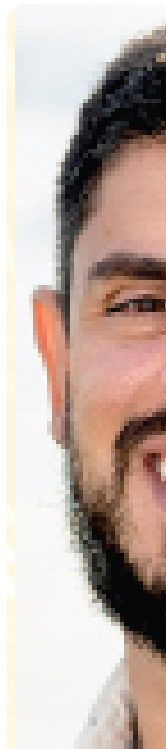
Saulo Chaves



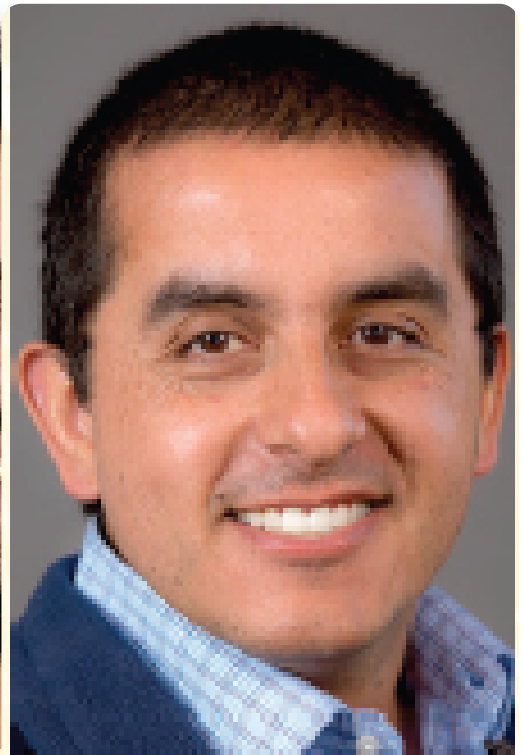
Mathada Umesh

Crop Science Forage and Grazinglands (C06) Winners

“Overseeding Aeschynomene and N Fertilization Effects on Forage Characteristics, N Fixation, and N₂O Emissions of Bahiagrass Pastures” by Jaime Garzon, Joao M. B. Vendramini, Maria L. Silveira, Jose Carlos B. Dubeux Jr, HuiLing Liao, Lynn E. Sollenberger, Hiran M. S. da Silva, Vinicius C. Gomes, and Hugo M. R. de Oliveira.
See <https://doi.org/10.1002/csc2.20981>



Er



Jaime Garzon

“Grazing Intensity Effects on Sward Responses of UF Riata Bahiagrass” by Erick R. S. Santos, José C. B. Dubeux Jr., Lynn E. Sollenberger, Cheryl L. Mackowiak, Carlos C. Vela Garcia, Gleise M. Silva, Michelle C. B. Siqueira, David M. Jaramillo, Flávia O. S. van Cleef, Luana Q. S. D. Zagato, Daciele S. Abreu, and Nicolas DiLorenzo. See

<https://doi.org/10.1002/csc2.21069>

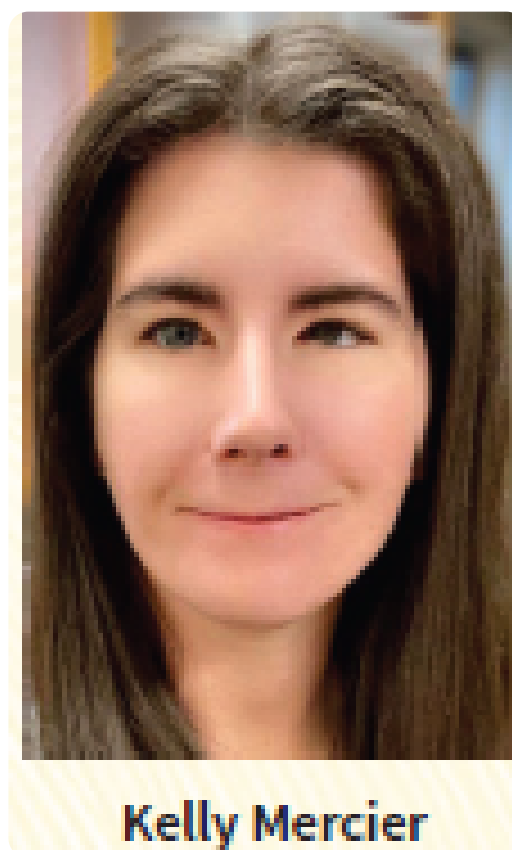
“Managing Interspecies Competition to Improve Spring Pasture Maturity, Nutritive Value, and Biomass” by Kelly M. Mercier, Eric D. Billman, Kathy J. Soder, David M. Jaramillo, Sarah C. Goslee, and Paul R. Adler. See

<https://doi.org/10.1002/csc2.20892>

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

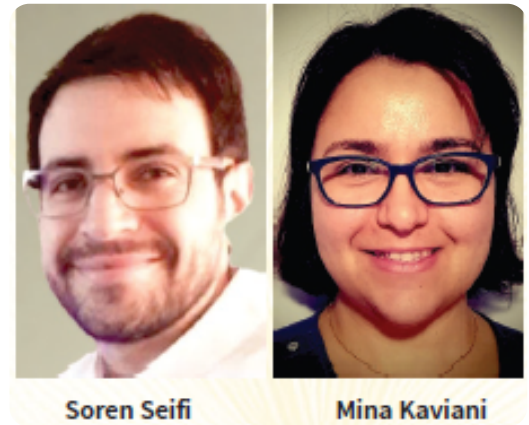
“Underlying Mechanisms of FHB Susceptibility and Resistance in Wheat: Insights from a TranscriptomeBased Analysis” by Soren Seifi, Mina Kaviani, Alireza

Navabi, Elizabeth A. Lee, and Helen M. Booker. <https://doi.org/10.1002/csc2.20974>



“Transcription factor OsDOF1 enhances cold stress tolerance potentially through interactions with OsICE1 and its target genes in rice (*Oryza sativa* L.)” by Jia Liu, Qinglin Meng, Hongtao Xiang, Fengmei Shi, Ligong Ma, Yichu Li, Liangbin Yu, Chunlai Liu, Yu Liu, and Baohua Su. See

<https://doi.org/10.1002/csc2.21073> (no photo available)



Crop Science Plant Genetic Resources (C08) Winners



“Genomic Insights into the NPGS Intermediate Wheatgrass Germplasm Collection” by Jared Crain, Steve Larson, Sajal Sthapit, Kevin Jensen, Jesse Poland, Kevin Dorn, Aaron Thomas, and Lee DeHaan. See <https://doi.org/10.1002/CSC2.20944>

“Safeguarding Plant Genetic Resources in the United States During Global Climate Change”

by Gayle M. Volk, Dan Carver, Brian M. Irish, Laura Marek, Anne Frances, Stephanie Greene, Colin K. Khoury, John Bamberg, Alfonso del Rio, Marilyn L. Warburton, and Peter K. Bretting. See

<https://doi.org/10.1002/CSC2.21003>



Gayle Volk

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