

SorghumBase Newsletter - Spring 2024

Dear SorghumBase Community,

We hope this finds you well as we bring you updates and highlights from the first quarter of 2024.



In the first part of the year, the SorghumBase team actively participated in several prominent conferences: [Plant and Animal Genome Conference \(PAG31\)](#) in January, [Maize Genetics Conference \(MGC\)](#) at the end of February, and the [Sorghum Improvement Conference of North America \(SICNA\)](#) and the American Society of Plant Biologists conference, Northeast in April (ASPB-NE). At SICNA, we hosted a SorghumBase workshop and were delighted to demonstrate some new features added in [SorghumBase v7](#) and announce plans to initiate a working group on phenotyping. During the Community Germplasm Committee (CGC) meeting at SICNA, we also presented the progress on the sorghum community marker panel (CMP) and its commercial release during Q2 for US breeders and researchers.



SorghumBase was present at the AgBioData Consortium Booth Exhibit during PAG31. From left to right Leonore Reiser, Doreen Ware, Marcela K. Tello-Ruiz, Karen Yook, Peter Selby, Andrew Olson, and Tanya Berardini.

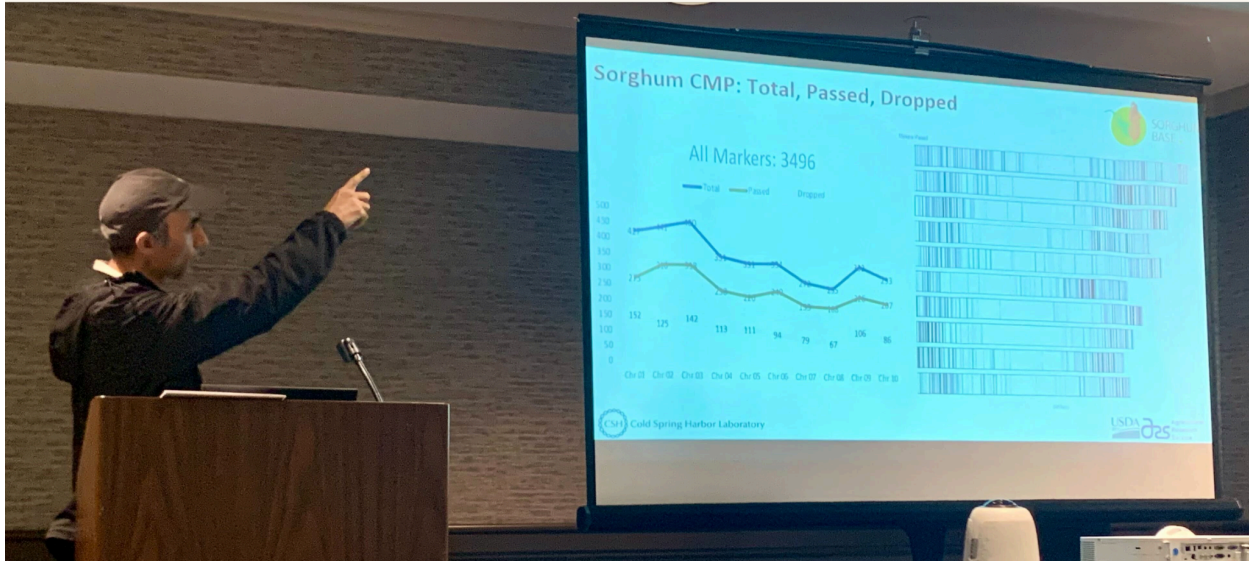
The gene search interface in SorghumBase now offers seamless access to gene, transcript and protein sequences under the Sequences tab, and sorghum accessions from natural and mutant populations predicted to have loss-of-function alleles are listed in the Germplasm tab. The genetic variation data mapped to the sorghum BTx623 v3 reference genome have been assigned rsIDs. These persistent, unique identifiers will help track genetic variation and associated phenotypes across sorghum varieties, assembly versions of the same variety, and SNP marker arrays.

SorghumBase v7 also includes a newly integrated database of nearly 300 [funded projects](#). Our publications database has grown to 972 papers and, as we continue our endeavor to highlight current research, six new blogs on research papers have been published in collaboration with their authors since the beginning of the year.



Breeding and Biotechnology panel discussion chaired by Terry Felderhoff, Kansas State University, and Nicholas Gladman, USDA-ARS, Cold Spring Harbor Laboratory. Speakers from left to right: Zhanguo Xin, USDA; Noah Winans, PhD student in Bill Rooney's lab at Texas A&M University; and Yinping Jiao, Texas Tech University. Photo credit SorghumBase Team.

We are proud to collaborate with the sorghum community and want to call attention to the efforts of undergraduate students at Mercer University, who are actively engaged in curating sorghum genes using SorghumBase tools. Over a three-month period, these students utilized the gene tree visualization tool and Apollo gene editor to refine gene models, focusing on approximately 600 sorghum genes. Their efforts targeted structural inaccuracies in genes related to crucial functions, such as sugar and metal transport, and disease resistance. The curated gene models generated by the students will be showcased at the University's Annual Student Symposium. Furthermore, they will contribute to micropublications focusing on sorghum orthologs of Arabidopsis genes involving strigolactone, adding valuable insights to the scientific community.



Vivek Kumar presenting "Sorghum Community Genotyping Resources" in the CGC meeting at SICNA. Photo credit SorghumBase Team.

As we embark on the rest of 2024, we eagerly anticipate engaging with the community and developing resources to support sorghum researchers. Here's what's on the horizon:

- We are gearing up for upcoming conferences such as the American Society of Plant Biologists conference (ASPB), the CROPS conference and others. We look forward to connecting with you at these events.
- Stay tuned as we prepare to host the SICNA 2024 conference proceedings at SorghumBase.
- We remain committed to fostering collaboration with the community and advancing standards for data integration. Our ongoing efforts towards FAIR data principles aim to ensure accessibility and interoperability of research data.

Thank you for your continued support and engagement with SorghumBase. Together, we are driving innovation and making strides in sorghum research. We welcome your feedback and suggestions as we strive to enhance SorghumBase to better serve your needs.

Best regards,

Doreen Ware & Nick Gladman
SorghumBase Team