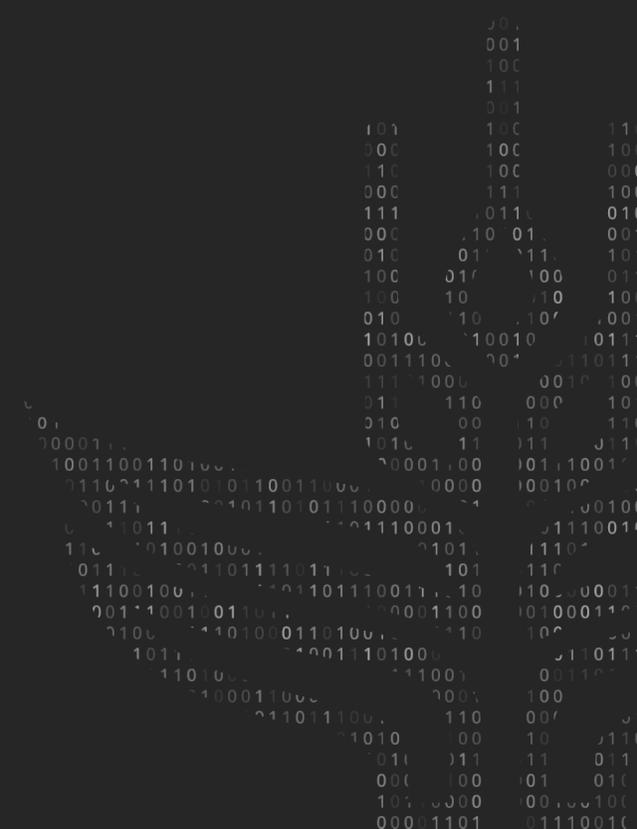


# Genetic Resources for Climate Adaptation and Mitigation

7 Things to Consider



# Re-validation of the need and value of germplasm collections



# Heat, yes. But not only.

Article | Published: 05 October 2020

## Intraspecific diversity as a reservoir for heat-stress tolerance in sweet potato

Bettina Heider , Quentin Struelens, Émile Faye, Carlos Flores, José E. Palacios, Raul Eyzaguirre, Stef de Haan & Olivier Dangles 

*Nature Climate Change* **11**, 64–69 (2021) | [Cite this article](#)

**1003** Accesses | **3** Citations | **119** Altmetric | [Metrics](#)

<https://www.nature.com/articles/s41558-020-00924-4>

Published: 24 January 2020

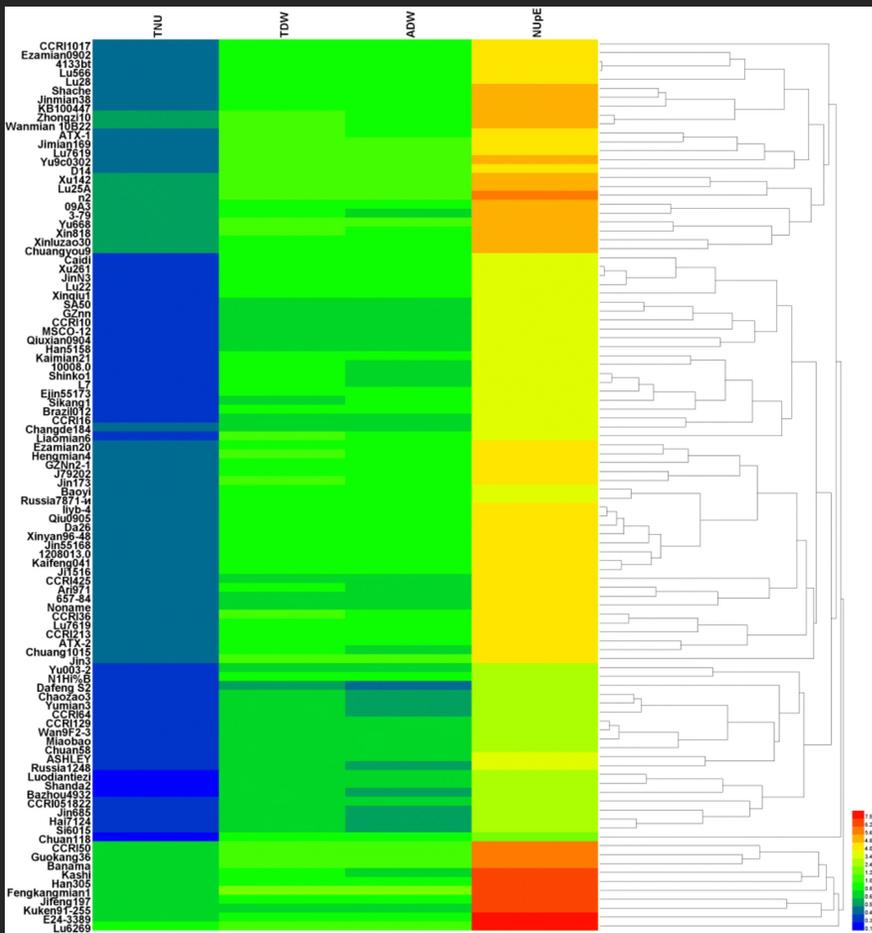
## Adaptation of common bean lines to high temperature conditions: genotypic differences in phenological and agronomic performance

Juan Carlos Suárez , José A. Polanía, Amara T. Contreras, Leonardo Rodríguez, Leidy Machado, Claudia Ordoñez, Steve Beebe & Idupulapati M. Rao

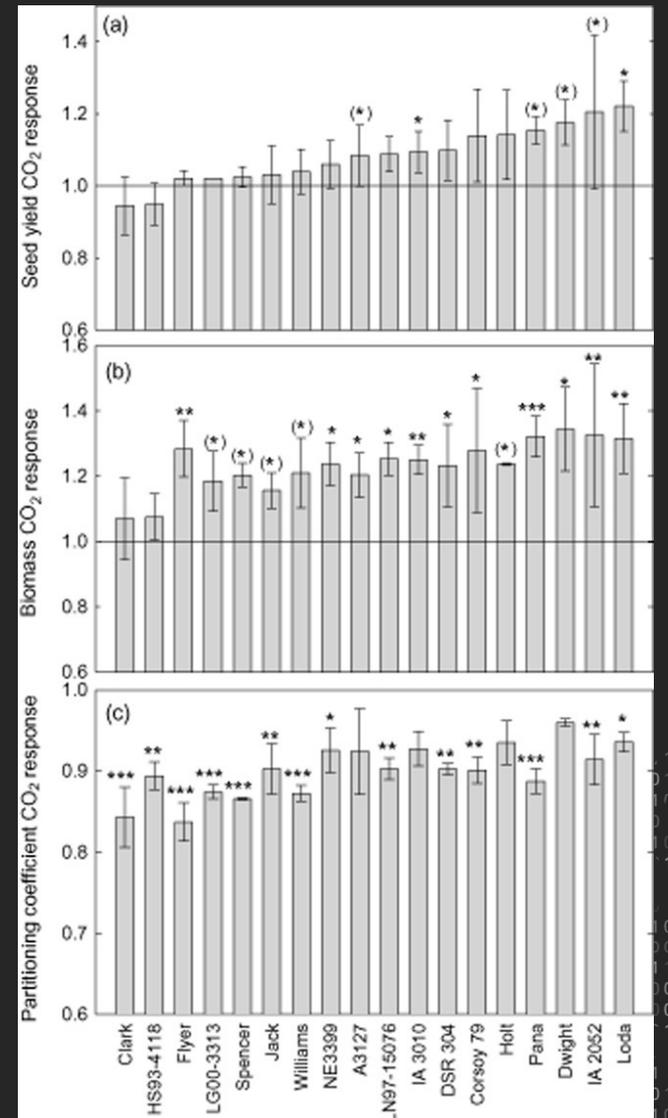
*Euphytica* **216**, Article number: 28 (2020) | [Cite this article](#)

**368** Accesses | **2** Citations | **5** Altmetric | [Metrics](#)

<https://link.springer.com/article/10.1007/s10681-020-2565-4>



# New traits for screening



Research | Open Access | Published: 02 August 2018

## Identification and screening of nitrogen-efficient cotton genotypes under low and normal nitrogen environments at the seedling stage

Hengheng ZHANG, Xiaoqiong FU, Xiangru WANG, Huiping GUI, Qiang DONG, Nianchang PANG, Zhun WANG, Xiling ZHANG & Meizhen SONG

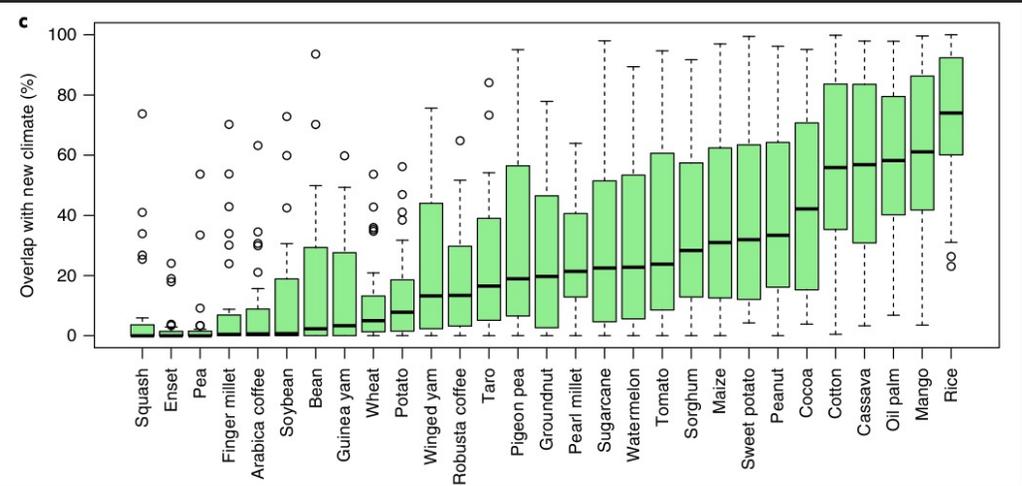
*Journal of Cotton Research* 1, Article number: 6 (2018) | Cite this article

2707 Accesses | 9 Citations | Metrics

Is there potential to adapt soybean (*Glycine max* Merr.) to future [CO<sub>2</sub>]? An analysis of the yield response of 18 genotypes in free-air CO<sub>2</sub> enrichment

*Plant, Cell & Environment*, Volume: 38, Issue: 9, Pages: 1765-1774, First published: 01 September 2014, DOI: (10.1111/pce.12443)

# Novel climates, novel environments, novel cultures



Letter | Published: 25 September 2019

## Potential adaptive strategies for 29 sub-Saharan crops under future climate change

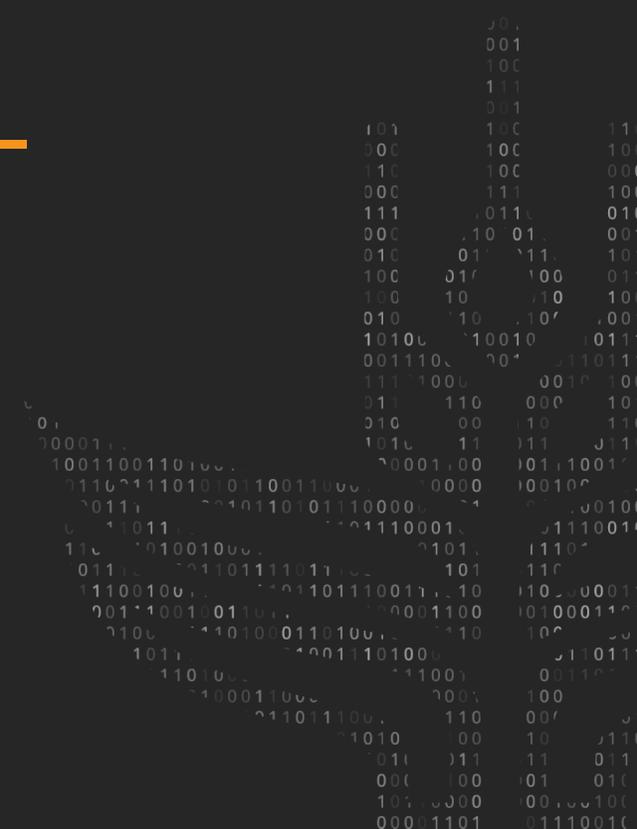
Samuel Pironon , Thomas R. Etherington, James S. Borrell, Nicola Kühn, Marc Macias-Fauria, Ian Ondo, Carolina Tovar, Paul Wilkin & Katherine J. Willis

*Nature Climate Change* **9**, 758–763 (2019) | [Cite this article](#)

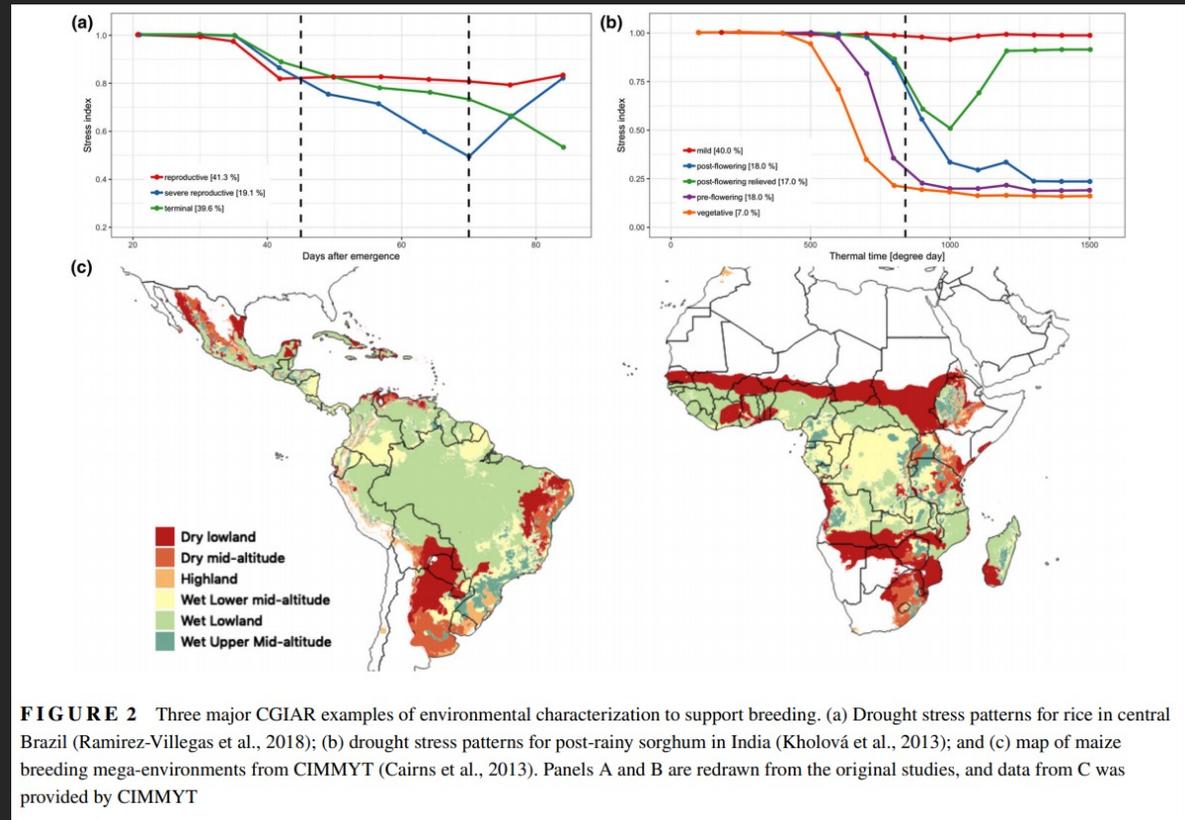
2250 Accesses | 20 Citations | 72 Altmetric | [Metrics](#)

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011011100 110 000000  
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00001101 0111001

# Genetic resources for multi-climate trait, multi- trait breeding



# Towards greater precision



**FIGURE 2** Three major CGIAR examples of environmental characterization to support breeding. (a) Drought stress patterns for rice in central Brazil (Ramirez-Villegas et al., 2018); (b) drought stress patterns for post-rainy sorghum in India (Kholová et al., 2013); and (c) map of maize breeding mega-environments from CIMMYT (Cairns et al., 2013). Panels A and B are redrawn from the original studies, and data from C was provided by CIMMYT

PREDICTIVE AGRICULTURE SPECIAL ISSUE

Crop Science

## CGIAR modeling approaches for resource-constrained scenarios: I. Accelerating crop breeding for a changing climate

Julian Ramirez-Villegas<sup>1,2\*</sup> | Anabel Molero Milan<sup>3\*</sup> | Nickolai Alexandrov<sup>4</sup> |  
Senthold Asseng<sup>5</sup> | Andrew J. Challinor<sup>6</sup> | Jose Crossa<sup>3</sup> | Fred van Eeuwijk<sup>7</sup> |  
Michel Edmond Ghanem<sup>8,9</sup> | Cecile Grenier<sup>1,10</sup> | Alexandre B. Heinemann<sup>11</sup> |  
Jiankang Wang<sup>12</sup> | Philomin Juliana<sup>3</sup> | Zakaria Kehel<sup>8</sup> | Jana Kholova<sup>13</sup> |  
Jawoo Koo<sup>14</sup> | Diego Pequeno<sup>3</sup> | Roberto Quiroz<sup>15,16</sup> | Maria C. Rebolledo<sup>1,10</sup> |  
Sivakumar Sukumaran<sup>3</sup> | Vincent Vadez<sup>13</sup> | Jeffrey W. White<sup>17</sup> | Matthew Reynolds<sup>3</sup>

# Threats to biodiversity + GR from climate change

Published: 12 May 2013

## Quantifying the benefit of early climate change mitigation in avoiding biodiversity loss

R. Warren , J. VanDerWal, J. Price, J. A. Welbergen, I. Atkinson, J. Ramirez-Villegas, T. J. Osborn, A. Jarvis, L. P. Shoo, S. E. Williams & J. Lowe

*Nature Climate Change* **3**, 678–682 (2013) | [Cite this article](#)

**9430** Accesses | **187** Citations | **254** Altmetric | [Metrics](#)

<https://www.nature.com/articles/nclimate1887>



Thank you!

