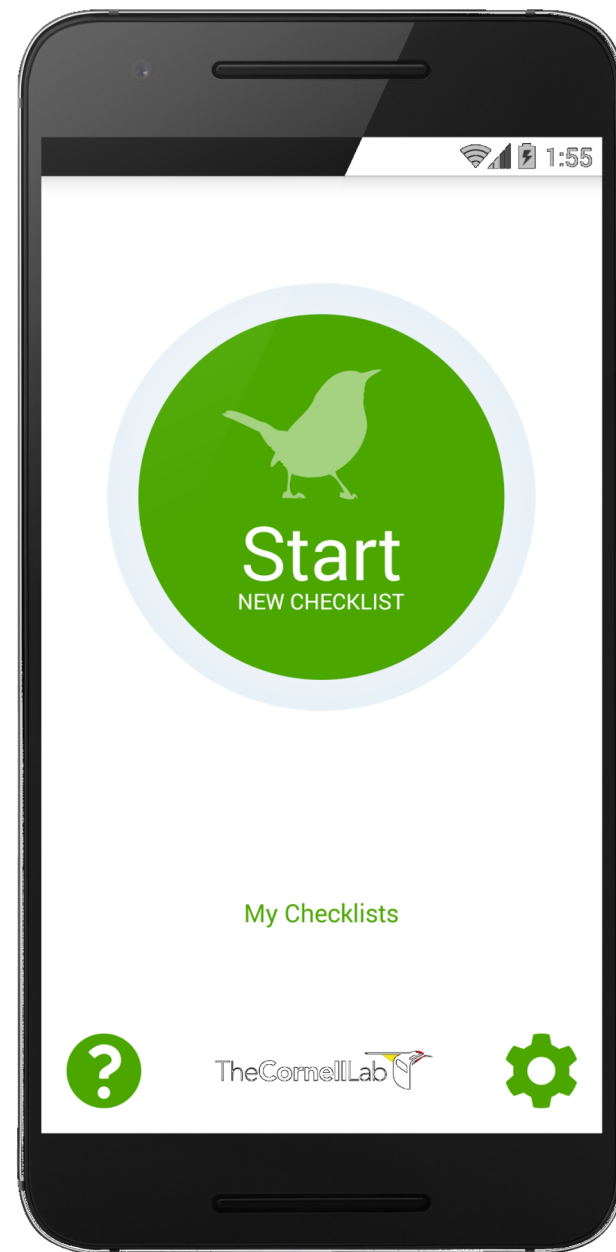
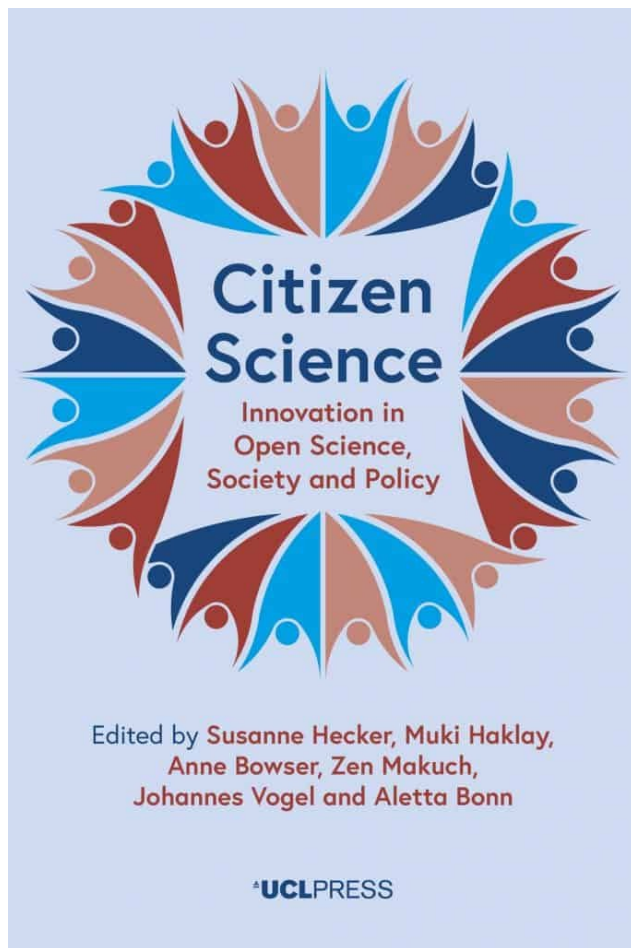


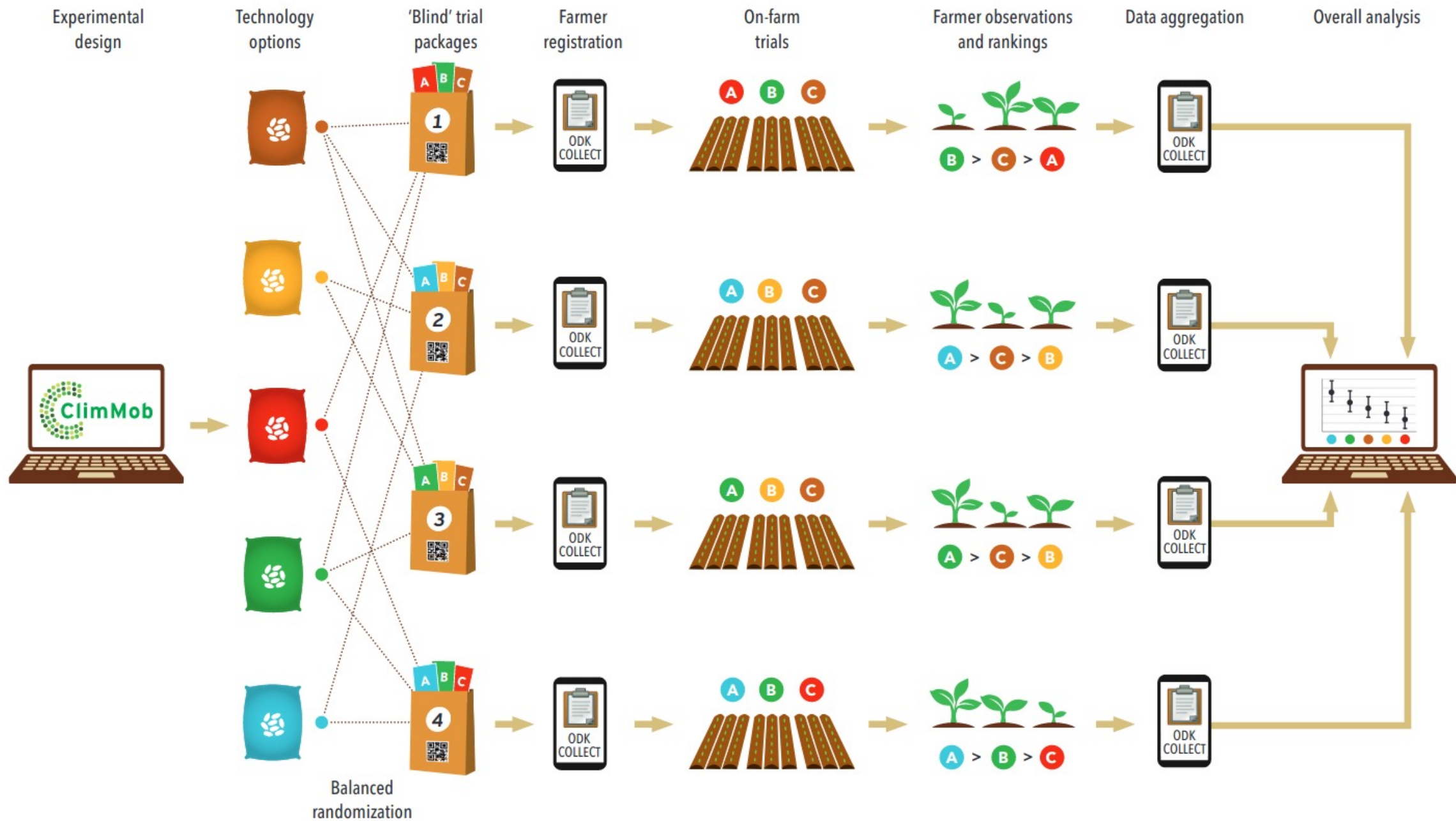
Crowdsourcing performance data of genebank accessions

Jacob van Etten

j.vanetten@cgiar.org

Alliance of Bioversity Int'l and CIAT





ClimMob platform

ClimMob

Log outProjects



Jacob van Etten
Actions

Main menu

Library

- Field agents
- Technology options
- Questions
 - My questions
 - ClimMob

Downloads

Chat

Cassava Rwanda 2020

Project definition100% Completed

Assign field agentsCompleted

Select technology optionsCompleted

Prepare registrationCompleted

Prepare data collectionCompleted

Share this link to show trial progress:
<https://testing.climmob.net/climmob3/projectInformation/239cbb4ffa4555a9682092a80ef319c3>
Copy to clipboard

Update project settings

Delete project

Data Collections

Please check the following types of questions are in the started assessments or include them in the next assessments:

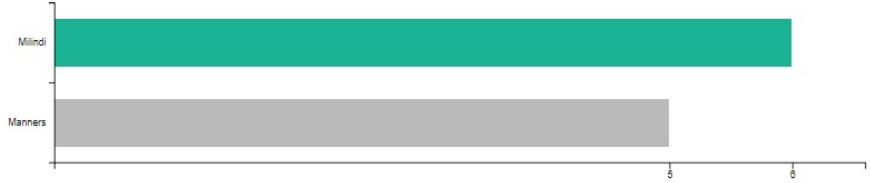
- ✓ Ranking of options
- ✗ Comparison with check
- ✗ Explanatory variables
- ✓ Overall ranking of options
- ✓ Overall comparison with check

Start an assessment

Participant registrationClosed

Data collection: FinalEvaluationClosed

Statistics



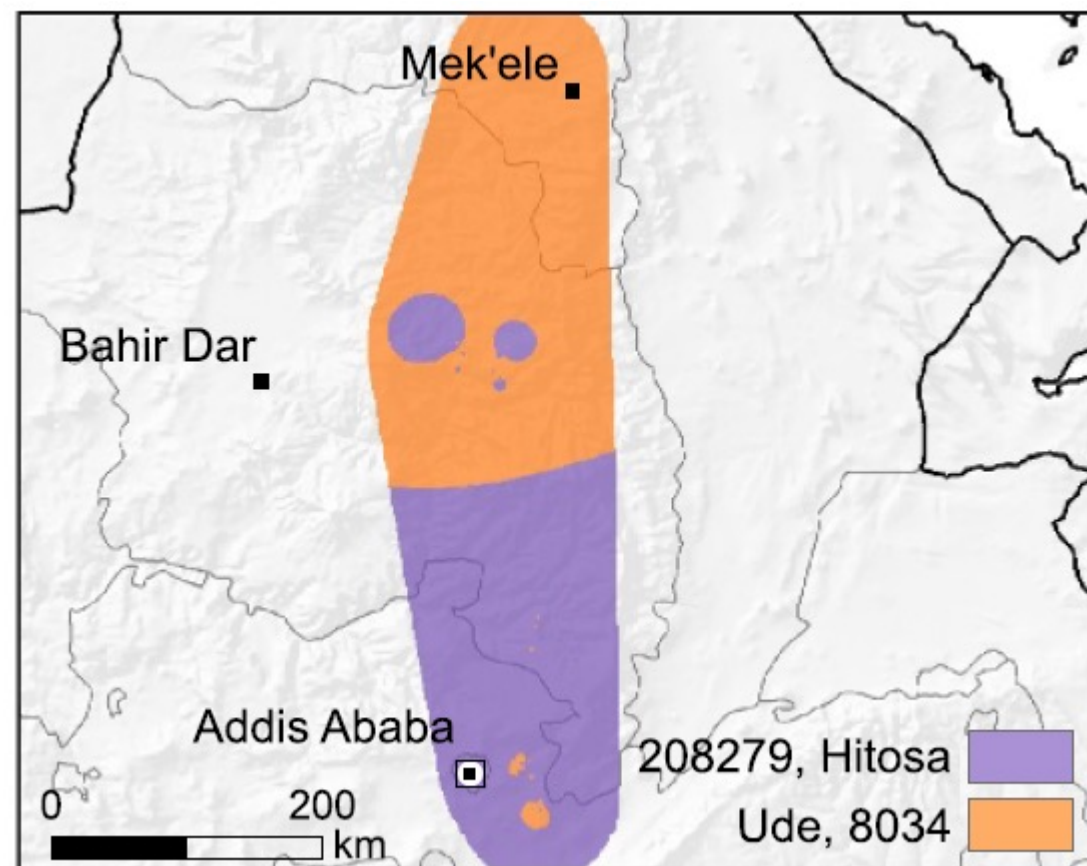
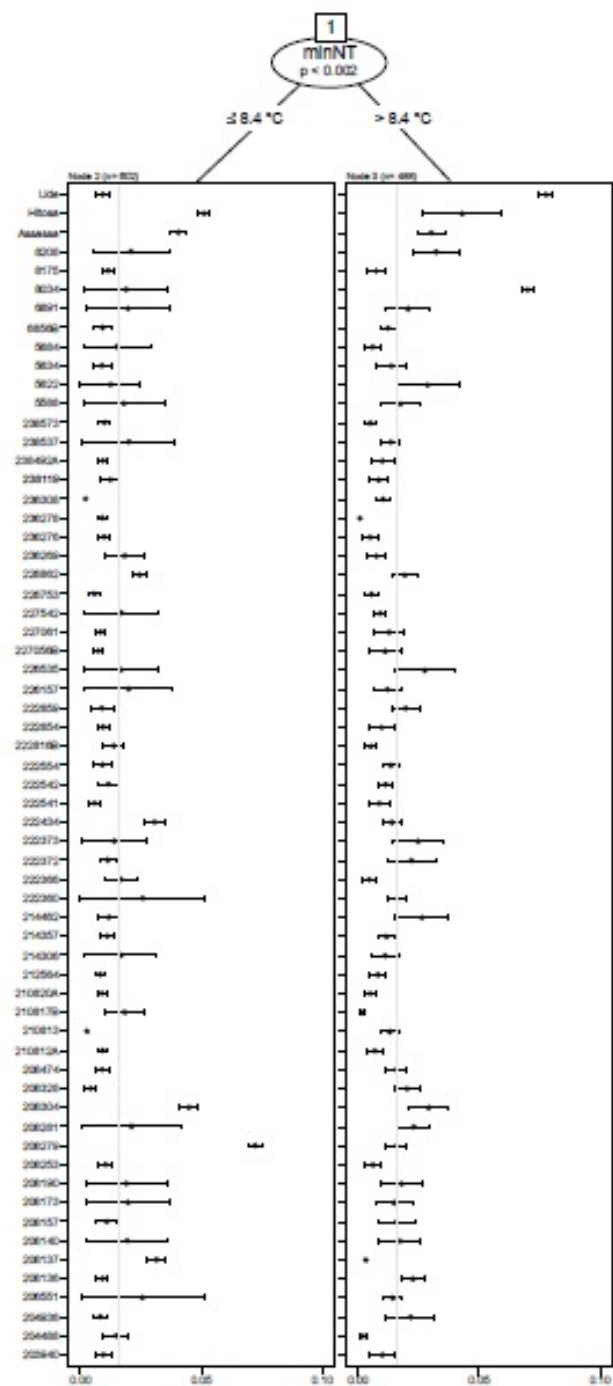
Total number of participants:	13
Number of submissions:	11 (84.6%)
Submissions with conflicts:	1
Last submission	47 days ago

View data

Download data

Analysis

Select variables to analyze



Data-driven decentralized breeding increases prediction accuracy in a challenging crop production environment

Kauê de Sousa^{1,2}, Jacob van Etten², Jesse Poland³, Carlo Fadda², Jean-Luc Jannink^{4,5}, Yosef Gebrehawaryat Kidane^{6,7}, Basazen Fantahun Lakew^{6,8}, Dejene Kassahun Mengistu^{6,7}, Mario Enrico Pè^{7,9}, Svein Øivind Solberg¹, Matteo Dell'Acqua^{7,9[*]}

¹ Department of Agricultural Sciences, Inland Norway University of Applied Sciences, 2318 Hamar, Norway

² Bioversity International, 00054 Maccarese, Rome, Italy

³ Department of Plant Pathology, Kansas State University, KS 66506 Manhattan, USA

⁴ College of Agriculture and Life Sciences, Cornell University, NY 14853 Ithaca, USA

⁵ Agricultural Research Service, United States Department of Agriculture, NY 14853 Ithaca, USA

⁶ Bioversity International, Ethiopia Office, 1000 Addis Ababa, Ethiopia

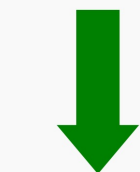
⁷ Institute of Life Sciences, Scuola Superiore Sant'Anna, 56124 Pisa, Italy

⁸ Ethiopian Biodiversity Institute, 1000 Addis Ababa, Ethiopia

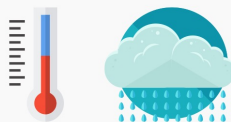
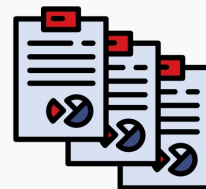
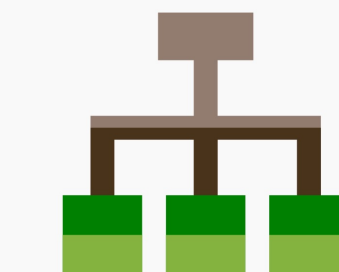
⁹ Center for Climate Change Studies and Sustainable Actions (3CSA), Pisa, Italy

[*]Correspondence should be addressed to: m.dellacqua@santannapisa.it

Crop breeding must embrace the broad diversity of smallholder agricultural systems to ensure food security to the hundreds of millions of people living in challenging production environments. This challenge can be addressed by combining genomics, farmers' knowledge, and environmental analysis into a data-driven decentralized approach (3D-breeding). We tested this idea as a proof-of-concept by comparing a durum wheat (*Triticum*

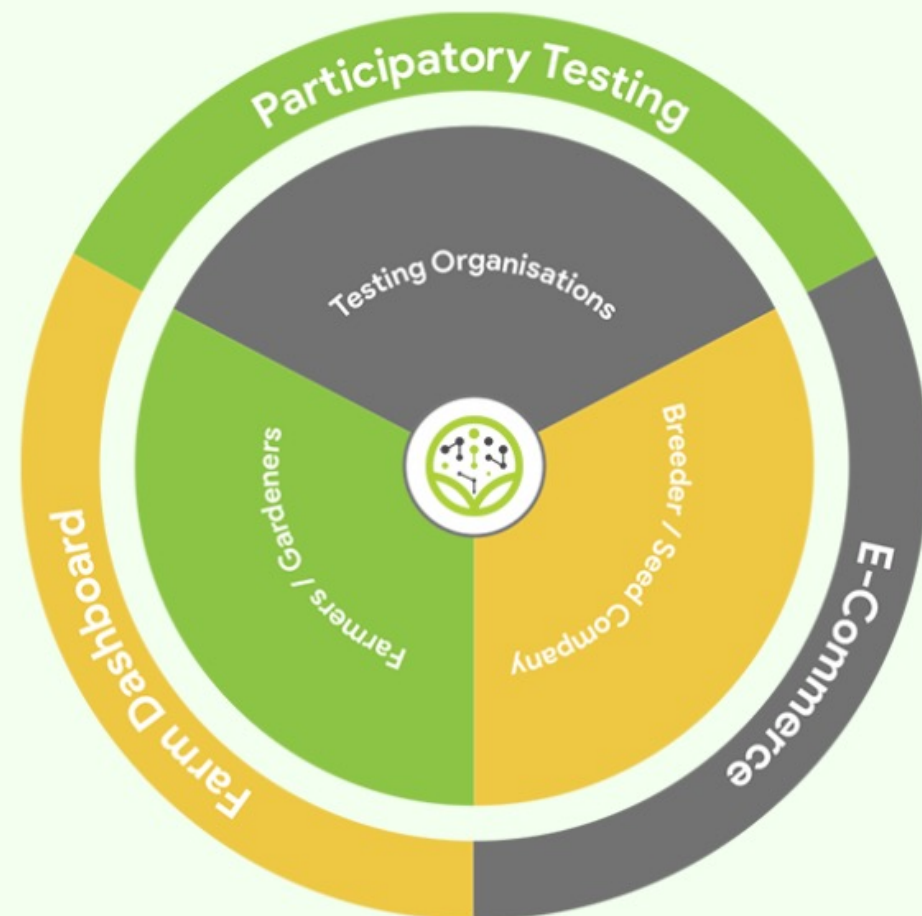
A

$A > C > D$
 $C > D > B \rightarrow A > C > D > B$
 $A > D > B$

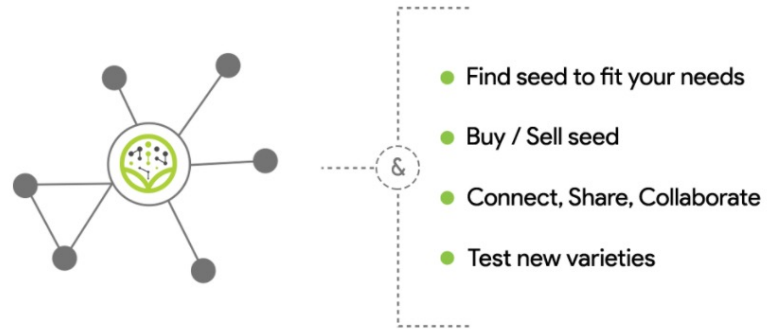
**B****D****C****E**

The Seed Collective Intelligence Platform: Disrupt, Empower, Grow

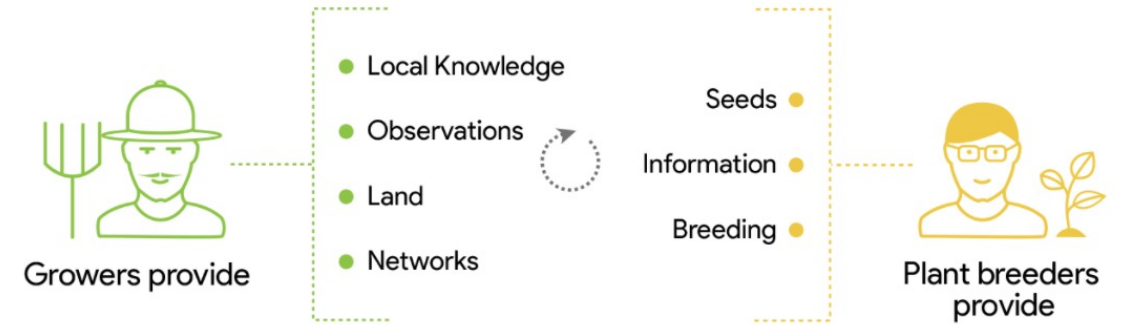
We apply crowdsourcing approach to revolutionize variety testing, by providing valid alternatives to the highly centralized, capital-dependent model currently in place. The benefits of low capital requirements and highly granular data, coupled with a decentralized, flexible, and evolutive testing approach would ultimately contribute to more diversity in agricultural and food systems. Increased availability and use of diverse seed would create more diversity in agricultural landscapes, contributing to “breeding ecosystems” that could evolve much quicker in face of climate change, boost local adaptation and performance, and bring resiliency and food sovereignty to local economies in an era of globalizing fragility. Farmers would be able to predict more accurately the outcomes of their actions, react quicker in the face of nature’s reoccurring challenges as patterns and changes will be captured, analyzed and communicated. And, ultimately, the end user (shopper, baker, chef, etc.), farmer and plant breeder will be directly connected as never before, creating a more democratic seed economy



Seedlinked Offers



You Collaborate

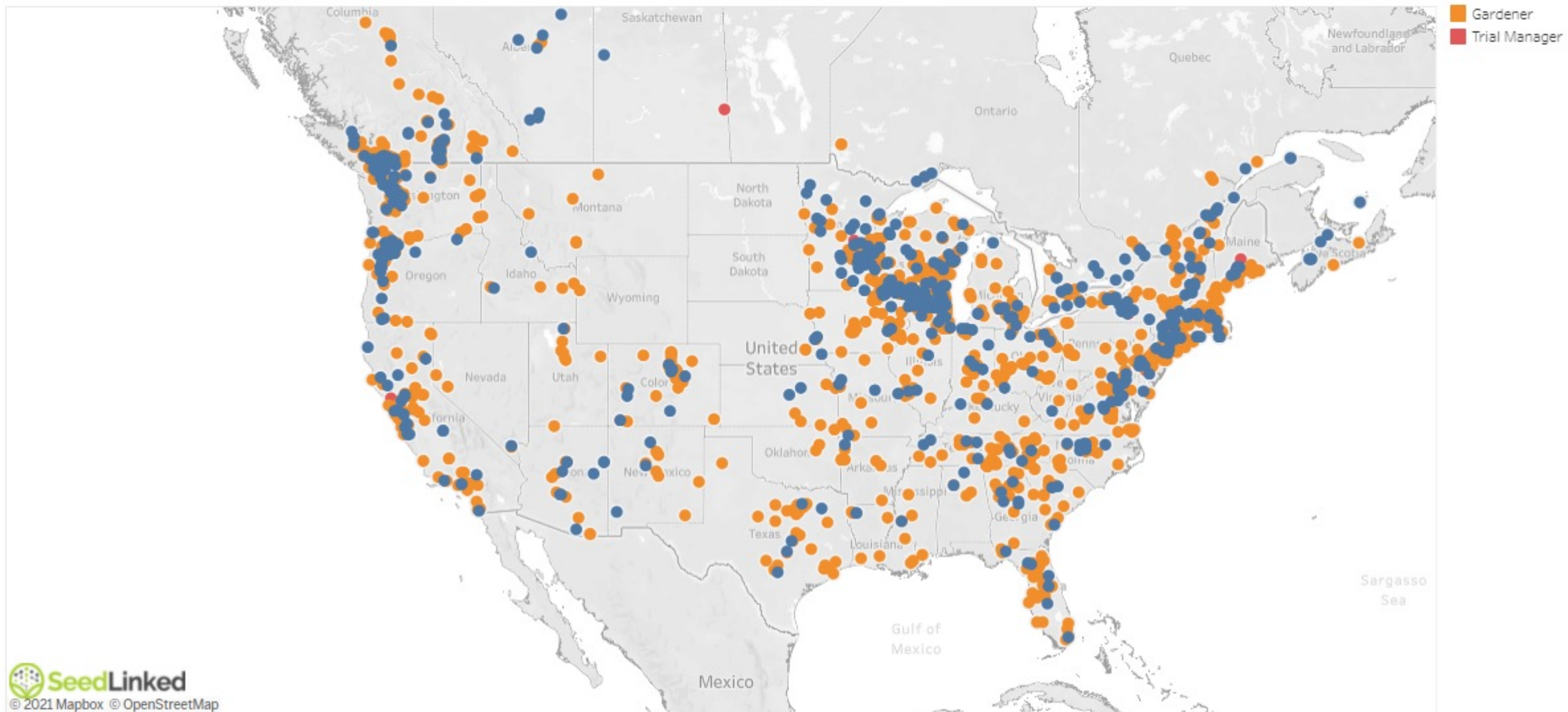


Everyone Benefits





2021 SeedLinked network (2700 growers)





INCREASE – Intelligent Collections of Food Legumes Genetic Resources for European Agrofood Systems



Share the Bean: A Citizen Science Experiment

Registration has now closed. New round will open at the end of 2021.

Science is not limited to scientists. Everyone can get involved.

Public participation in scientific research is becoming more and more crucial in increasing everyone's understanding of science and its benefit to society. Most importantly, it advances scientific research itself. ...and it equally plays a crucial part in [INCREASE](#). Here, we are all about beans! The Citizen Science Experiment, conducted as part of the project, calls on all interested citizens to voluntarily contribute to and test an innovative decentralised approach to seed conservation, multiplication and sharing in order to conserve agro-biodiversity.

All you will need is access to a field, garden, terrace or balcony.



Pod formation

Using the INCREASE CSA App, you can provide valuable data on the time of the first visible appearance of a bean pod in your plot and take a picture as suggested in the video tutorial:



Tutorial: Pod Formation

Thank you

Jacob van Etten

j.vanetten@cgiar.org

climmob.net