

PLANT BREEDING MANAGEMENT AND ANALYTICS.

REINVENTED. INTEGRATED. INTUITIVE.



Apply intuitive process management, collection and analytics for better breeding outcomes.

The world's top companies and universities are using Phenome One for vegetables, field crops and ornamentals.

BREEDING PROCESS MANAGEMENT

Phenome One implements an organized process to easily manage your breeding data and to get the most out of your breeding research.



Phenome One's Breeding Process Management module supports all stages of the breeding process, including germplasm development and pedigrees, breeding field design, selection management, crosses and observations.

Phenome One also scans the data and provides new insights and findings on the data. Recommendations produced by the system assist in making better decisions and pinpointing promising selections and crosses that could lead to new and better varieties.

Simply Intuitive:

- Load Excel files with genetic material (germplasm), trait definitions, observations and other experimental data in minutes, using Phenome One's wizards.
- Phenome One's main module has a simple, web based interface that allows users to easily browse their data, organized into folders, to manage germplasm and pedigrees, experiments, observations, traits (morphology or genetic traits) and more.
- Get reports with a single click to allow managing of sowing lists, field setup, planting, observations, genetic and phytopathology marker observations and more.
- Simple calls to action at each step of the breeding cycle, making work easy and efficient.



PHENOMAPP

Use Phenome One's Android application to offline collect data, observations and images in the field, using mobile devices with seamless integration with your main Phenome One backend system.

PhenomApp is an Android application for collecting plant phenotypes using tablets and smartphones. It provides offline capabilities to view existing information on plots and record new observations – traits and images, in the field, which are then synchronized back into the main system. Our users tell us that the transition from recording observations on paper to PhenomApp resulted in a significant increase in the amount of collected data and pictures.

Leverage Mobility in the Field

- Record phenotypes digitally. Save time, prevent typing errors and better organize your data
- Take pictures which are automatically matched to each plant / plot
- Sync data from your mobile device directly to the main system or into an Excel worksheet on your computer
- The application works offline or with an online connection
- Native Android application – works quickly and smoothly with no data entry delay



BETTER ANALYTICS, BETTER OUTCOMES

Apply statistics and visualization with Phenome One to discover the trends and information you need for smart breeding.

Phenome One's Data Analytics module applies statistical methods and algorithms to assist in translating data generated in breeding programs into smart decisions, using customized statistical analysis, graphic visualization, statistical significance and more.

Best of Breed Analytics

- The platform integrates pedigree, genotype and phenotype and a range of statistical methods and visualization kits to query and analyze the data for both breeding and research.
- Phenome One presents distributions of quantitative and qualitative traits, multivariate analysis, clustering, heat-maps, pedigree overlays with multiple phenotypes (or markers), combining ability, genotype by environment, trait heritability, statistical tests (T test, F test, analysis of variance), correlations and more.
- The results of each query can be saved and accessed later, promoting collaboration within teams.
- Our analytics are based on the R project for statistical computing, providing a rich repertoire of easily invoked tools.
- R developers can write their own analyses as R functions, and incorporate them into the system to extend its functionality.