



Prediction of Phenotypes

- ▶ *Learn how your hybrid will perform before it is field tested, for selection and deselection*
- ▶ *Predict the performance of all possible offspring from your germplasm and select the best parents*
- ▶ *Elucidate higher-order correlations with machine learning algorithms to identify causal mutations*

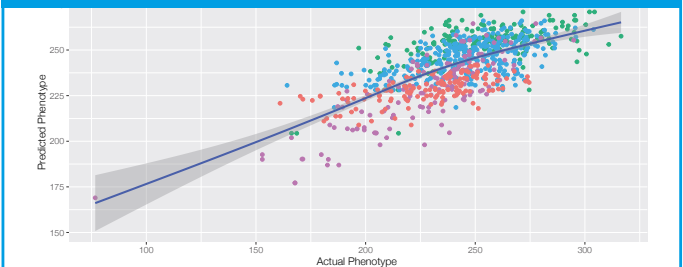
Computomics offers genomic selection and phenotype prediction as a service. We help you augment your phenotype-based program by automatically screening for resistances, qualitative and quantitative traits, so you can make well-informed decisions about selection and deselection.

Our key deliverable is enabling you to derive value from the results we obtain. Insightful, interpretable visualizations are an integral part of our work. We use machine learning-based regularized kernel methods to predict phenotypes from genome-wide markers. These methods model heterosis and genetic gain. We store the trained predictors to reproducibly analyze next season's data and make results directly comparable.

Case Study

We performed reference-free genotyping of four stages of a breeding program to determine which locations are most predictive for the entire region. This reduced the number of regions needed for early-stage selection from 11 to just 3, freeing up space and saving costs.

Visualizations



Contact Our Expert Scientist

Bjoern is our expert on genomic selection and prediction. Contact Bjoern at bg@computomics.com for a free consultation about your genomic selection project.



computomics®
molecular data analysis

Computomics GmbH
Phone +49 7071 568 3995
Christophstr. 32 · 72072 Tübingen · Germany
<https://computomics.com> · info@computomics.com

Computomics Corporation
Phone +1 (858) 832-4036
2858 University Ave #222 · Madison WI 53705 · USA
<https://computomics.com> · info@computomics.com