TraitMAGIC ™

All-inclusive Trait Mapping Package

PAVE THE WAY TO SMARTER BREEDING BY UNRAVELING THE CAUSATION GENETIC ELEMENTS CONTROLLING KEY COMMERCIAL TRAITS

Quickly map traits of your interest in any segregating population, with NRGene's TraitMAGIC - the complete trait mapping package.

We'll generate high resolution genetic map which is used to accurately phase founder line's chromosomes and reveal their complete segregation pattern in each progeny. Our special skim-sequencing derived analysis brings a new level of detail to genomic analysis and unlocks the secrets of your population-genomics.

QTL MAPPING HAS NEVER BEEN EASIER

Fully resolving the most complex trait genetics towards a straight forward incorporation in breeding

HIGHLY ACCURATE

We generate high-density marker maps for producing extremely accurate trait mapping, even in the most complex genomes

UNIQUE PHASED SOLUTION FOR HETEROZYGOTES

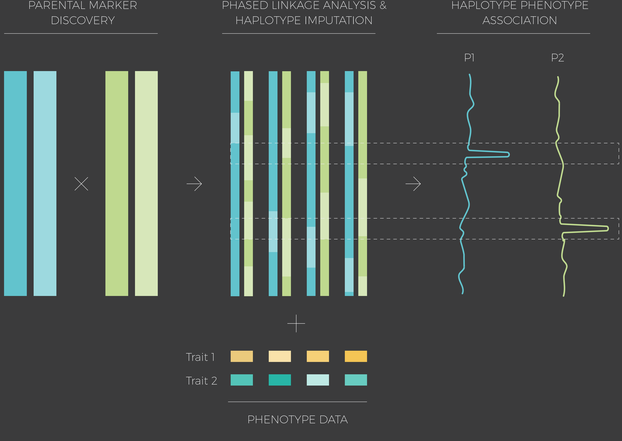
Proven ability to identify and correctly phase and map sequences even in complex heterozygote cases

TURN-KEY SOLUTION

We provide sequencing, marker discovery, genotyping, and trait mapping. Send us DNA and phenotype data and we will do the rest

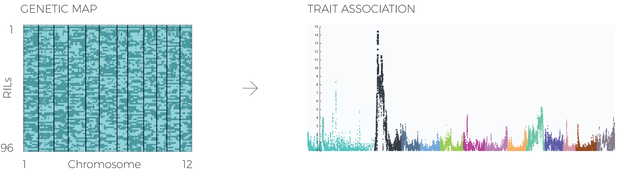
PHASED GENETIC MAP AND QTL MAPPING OF A HETEROZYGOTE CROSS (4 WAY HYBRID F1 POPULATION)

PHASED GENETIC MAP CONSTRUCTION | TRAIT MAPPING



REAL CASE STUDY 1 (HOMOZYGOTE):

241 significant loci affecting 129 fruit quality traits were identified by converting over 58,000 markers to 3,663 haplotype bins in a melon RIL population*



* Galpaz, N. et al. 2018. Deciphering Genetic Factors that Determine Melon Fruit-Quality Traits Using RNA-Seq-Based High-Resolution QTL and eQTL Mapping. The Plant Journal.

REAL CASE STUDY 2 (HETEROZYGOTE):

A phased haplotype approach (TraitMAGIC) was found superior to a consensus marker-based approach even when applied to <25% of a heterozygote F1 population

METHOD	# OF PROGENY ANALYZED	# OF LOCI IDENTIFIED	PREDICTION ACCURACY*
NRGENE	200	>8	70%
ALTERNATE	>800	1	0%

* percentage of progeny whose phenotype can be predicted with high accuracy based on the results

www.nrgene.com

Contact us to try out TraitMAGIC™ for the next QTL you want to map