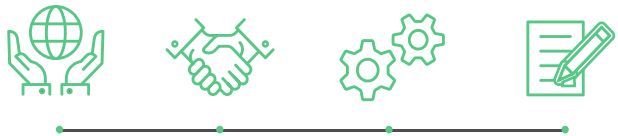
Plant & Seed Genotyping and Testing

Sustainability Inspired, Quality Driven.

SGS

SGS Institut Fresenius GmbH
TraitGenetics Section is a service provider for throughput genotyping and breeding.



Proprietary Illumina Infinium Arrays

- Wheat optimized 25K and 7K
- Brassica optimized 19K and 4K
- Maize optimized 25K and 9K
- Barley optimized 15K and 4K
- Sunflower optimized 10K
- Cotton optimized 11K
- Soybean optimized 5K
- Triticale/Rye 25K Wheat/5K Rye

We also process all commercially available Infinium arrays for all plant species (e.g. tomato, sorghum, pepper, potato, pea,…) using our own high quality cluster files.

Proprietary Axiom Arrays

- Wheat 135K
- Vegetable Multi Species 200K
  (tomato, melon, watermelon, cucumber, carrot, lettuce, onion, asparagus)

We also process all commercially available Axiom arrays for plant species (e.g. Maize 600K).

Marker Analysis Services

Illumina Infinium Genotyping

- HD, HTS, XT

Axiom Genotyping

- 96 and 384 Sample Platform

Single Marker Analysis

- 384-well KASP Platform
- Taq Man Platform for End-point and quantitative
- PCR Analysis

NGS, Sanger Sequencing

- for NGS-based SNP Genotyping, Candidate Gene and Haplotype Analysis

Further Genetic Analysis of Data

- Genomic Selection, GWAS, Genetic Mapping, Analysis of Population Structure and Genetic Relationships

Genotyping Arrays for Crops

25K AND 7K WHEAT

- 14,455 SNP markers from published 90K Infinium array
- 2,949 SNP markers from 35K Wheat Breeders array
- 5,536 new markers from our 135K Axiom array
- 265 gene-and trait-specific markers from the literature
  - ∑ 23,205 scorable SNP markers
  - The 7K array contains a subset (6.707) of the 25K array markers ideal for GS in combination with Imputation

15K AND 4K BARLEY

- 5,774 SNP markers from the Infinium 9K array
- 7,516 SNP markers from the Infinium 50K array
- 501 gene-specific SNP markers from the literature
  - ∑ 13,791 scorable SNP markers
  - The 4K array contains a subset (3,778) of the 15K array markers ideal for GS in combination with Imputation

10K SUNFLOWER

- ∑ 9,250 SNP markers from the 25K Infinium array

11K COTTON

- ∑ >10,000 SNP markers from the 63K Infinium array

25K AND 9K MAIZE

- 14,171 SNP markers from the Infinium50K array
- 8,847 SNP markers from Axiom 600K array
- 189 other SNP markers
  - ∑ 23,207 scorable SNP markers
  - The 9K array contains a subset (8,920) of the 25K array markers ideal for GS in combination with Imputation

19K AND 4K BRASSICA

- ∑ 18,535 scorable SNP markers from the Infinium 60K array (A and C genomes together for genotyping *Brassica oleracea, B. rapa and tetraploid B. napus)*
  - The 4K array contains a subset (3,900) of the 19K array markers ideal for GS in combination with Imputation

5K SOYBEAN

- The 5K array contains a subset (4,970) of the 6Kv2 and 50K array markers for Genomic Selection with Imputation

Genotyping Arrays for Vegetables

TOMATO (SOLANUM LYCOPERSICUM)
- >7,700 SNP markers on 10K SOLCAP Illumina Array
- >50,000 SNP markers on Axiom array

PEPPER (CAPSICUM SPEC.)
- >16,000 SNP markers on 19K Illumina Array

MELON (CUCUMIS MELO)
- >22,000 SNP markers on Axiom array

WATERMELON (CITRULLUS LANATUS)
- >41,000 SNP markers on Axiom array

CUCUMBER (CUCUMIS SATIVUS)
- >46,000 SNP markers on Axiom array

ASPARAGUS (ASPARAGUS OFFICINALIS)
- >23,000 SNP markers on Axiom array

CARROT (DAUCUS CAROTA)
- >28,000 SNP markers on Axiom array

LETTUCE (LACTUCA SATIVA)
- >30,000 SNP markers on Axiom array

ONION (ALLIUM CEPA)
- >10,000 SNP markers on Axiom array

Crop Science

Sustainability Inspired, Quality Driven.

Contact us

SGS INSTITUT FRESENIUS GmbH
TraitGenetics Section
Am Schwabeplan 1b
D-06466 Seeland OT Gatersleben, Germany

+49-(0)39482-79970

de.contact.traitgenetics@sgs.com

www.traitgenetics.com

WHEN YOU NEED TO BE SURE

SGS