



# AgriSeq GBS predesigned MTO panels

## High-throughput analysis of plant and animal genotypes via flexible and cost-effective technology

### Advanced panels for nearly any application

At Thermo Fisher Scientific, our passion for innovation has led us to design a wide range of catalog panels that are tailored to meet your needs. Applied Biosystems™ AgriSeq™ genotyping by sequencing (GBS) panels offer a diverse selection of animal and crop panels that can be used for trait selection, marker-assisted selection, quantitative trait loci (QTL) mapping, genome-wide association studies (GWAS), and genomic prediction modeling applications.

We take pride in our exclusive predesigned made-to-order (MTO) panels for a variety of agriculture, including both animal and plant species. These panels have been developed in collaboration with academic support and expert researchers, and are based on publicly available single-nucleotide polymorphism (SNP) content extracted from various publications.

AgriSeq high-density panels, ranging from 3K to 5K SNPs in size, are specifically designed to screen breeding populations for the most relevant SNPs with exceptional minor allele frequency and marker performance. Whether you need routine screening or other downstream genomic applications, these panels are a versatile solution. If you would like to learn more about our predesigned panels or panels that are in development, please reach out to your genotyping sales representative. We are committed to providing you with advanced solutions for your genomic research needs.

**Key features of AgriSeq targeted GBS solutions include:**

- **Flexible genotyping system**—target up to 5,000 relevant markers
- **Reproducible SNP targets**—based on a robust *in silico* design approach
- **Simple workflow of 2–3 days**—with automated data analysis
- **Experienced bioinformatics support**—consultation service available for panel design and verification
- **Easy interpretation and visualization of results**—industry-standard outputs including allele matrix, TOP, and TOP/BOTTOM output

**Ion Torrent™ NGS systems**

The simplicity, scalability, and speed of the Ion Chef™ and Ion GeneStudio™ S5 systems are enabling NGS to move from research to applied markets. Integrated with the AgriSeq targeted GBS workflow, these systems are designed to deliver results with minimal hands-on time, so you can spend less time doing repetitive lab work.



**Key features include:**

- Automated template preparation and chip loading
- Cartridge-based reagent systems
- Process up to 3,042 samples with 500 markers in a single day
- Sequencing run times as fast as 2.5 hours per chip
- Simplified NGS data analysis and variant calling with easy-to-use Torrent Suite™ Software and variantCaller plugin

**Ordering information**

AgriSeq panel description			
Plants	No. of SNPs	Animals (livestock, aquaculture, and companion animals)	No. of SNPs
USDA wheat 5K	5,000	ISAG bovine parentage	554
Strawberry 4.5K	5,000	ISAG equine parentage and traits/disorders	950
Maize QA/QC	160	Canine traits and disorders	154
Maize trait	259	Canine parentage	394
Maize 3.6K	3,600	Feline parentage and traits/disorders	165
Lettuce QA/QC/trait	215	Caprine	450
Sunflower	700	Ovine	400
Chickpea	5,000	Pacific oyster	592
Groundnut	5,000	Coho salmon	434
Pearl millet	4,000	Chinook salmon	599
Cotton	4,500	Sockeye salmon	598
Tomato 5K	5,000	Eulachon	580
Pepper 5K	5,000		
Barley 3.5K	3,500		
Pine 1K	1,000		

Learn more at [thermofisher.com/agrigenomics](https://thermofisher.com/agrigenomics)

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