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Biology for a better world

Achieve breeding and selection deadlines with automated genotyping analysis

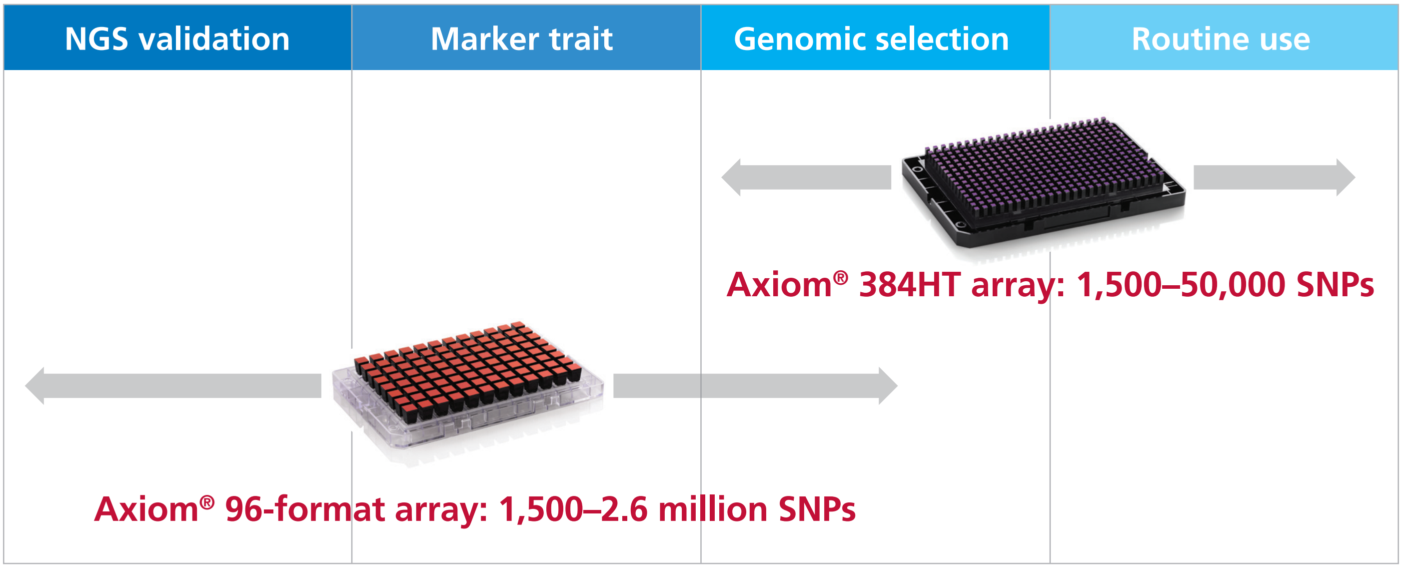
Axiom® myDesign™ Genotyping Arrays

Axiom® Genotyping Solution

The technology of choice for your agricultural genomics program—now and tomorrow

Flexible, customized genotyping solutions for expediting genomic progress in research and mainstream commercial agrigenomics

Genetic breeding and selection programs in agriculture typically process a large number of samples in a short period of time. The genotyping platform of choice must deliver guaranteed marker consistency and precision, fast turnaround time, and cost-effectiveness.

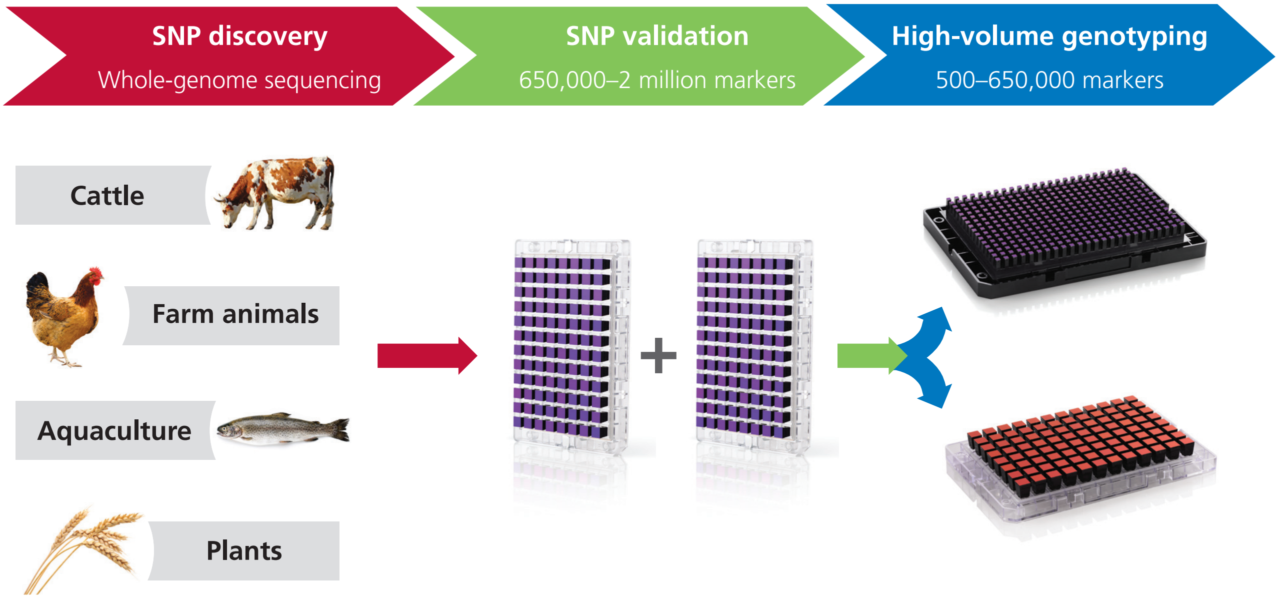


Axiom® myDesign™ custom genotyping arrays utilize advanced manufacturing techniques for use in genomic applications, including validation of *de novo* markers, genome-wide association studies, marker-assisted selection, and genomic selection as well as high-throughput routine use.

Flexible and unmatched custom design and analysis capabilities
Axiom myDesign custom arrays offer fast turnaround from design to delivery, consistent marker content, and cost-effectiveness.

- **Multi-species and custom content** – Available in 96- and 384-array layouts. Design markers from multiple species on the same array.
- **Guaranteed precision** – "No marker lost" manufacturing ensures continuity, reproducibility, and accuracy in genomic selection, unmatched by bead arrays.
- **Consistent supply** – Designs never expire; the photolithographic design technology ensures access to the same array content for the duration of the genotyping program.

Array-based genotyping offers simplicity, ease of use, and a cost-effective way to genotype millions of data points in routine breeding applications when processing large numbers of samples and turnaround time are both important.



SNP discovery
Whole-genome sequencing

SNP validation
650,000–2 million markers

High-volume genotyping
500–650,000 markers

Cattle

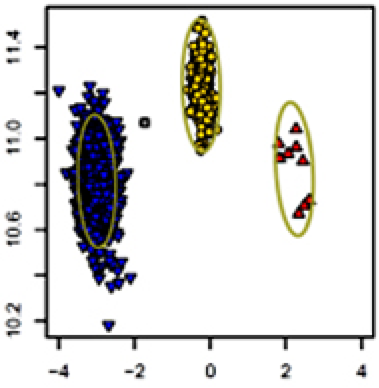
Farm animals

Aquaculture

Plants

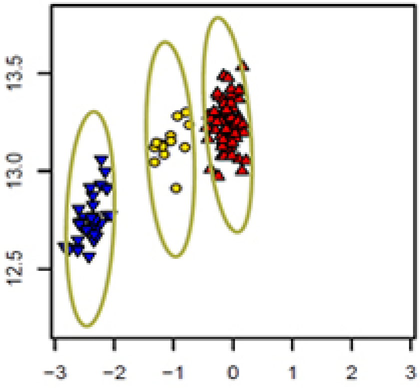
Maximize the potential of your genomic program with a three-step approach: (1) identify polymorphisms from existing arrays or sequencing initiatives, (2) validate polymorphisms in multiple samples to eliminate false positives and identify markers relevant to population of interest, and (3) transfer the most informative markers with 100% fidelity to a higher throughput and more cost-effective format for use in routine breeding program.

High-resolution markers



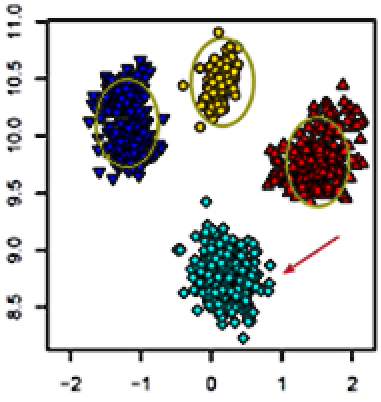
Example of SNP with good cluster resolution and at least two examples of the minor allele.

Polyploid cluster plot



Cluster plot showing automated clustering in polyploid species with software that predicts cluster behavior and automatically assigns genotypes.

Off-target variants



Reproducible and previously uncharacterized variants caused by double deletion, sequence non-homology, or DNA secondary structure.

Advanced automated genotype-calling algorithms and SNP categorization offer the speed and accuracy to make critical breeding decisions in production agrigenomics.

To learn more about Affymetrix' agrigenomics products, visit www.affymetrix.com/agrigenotyping

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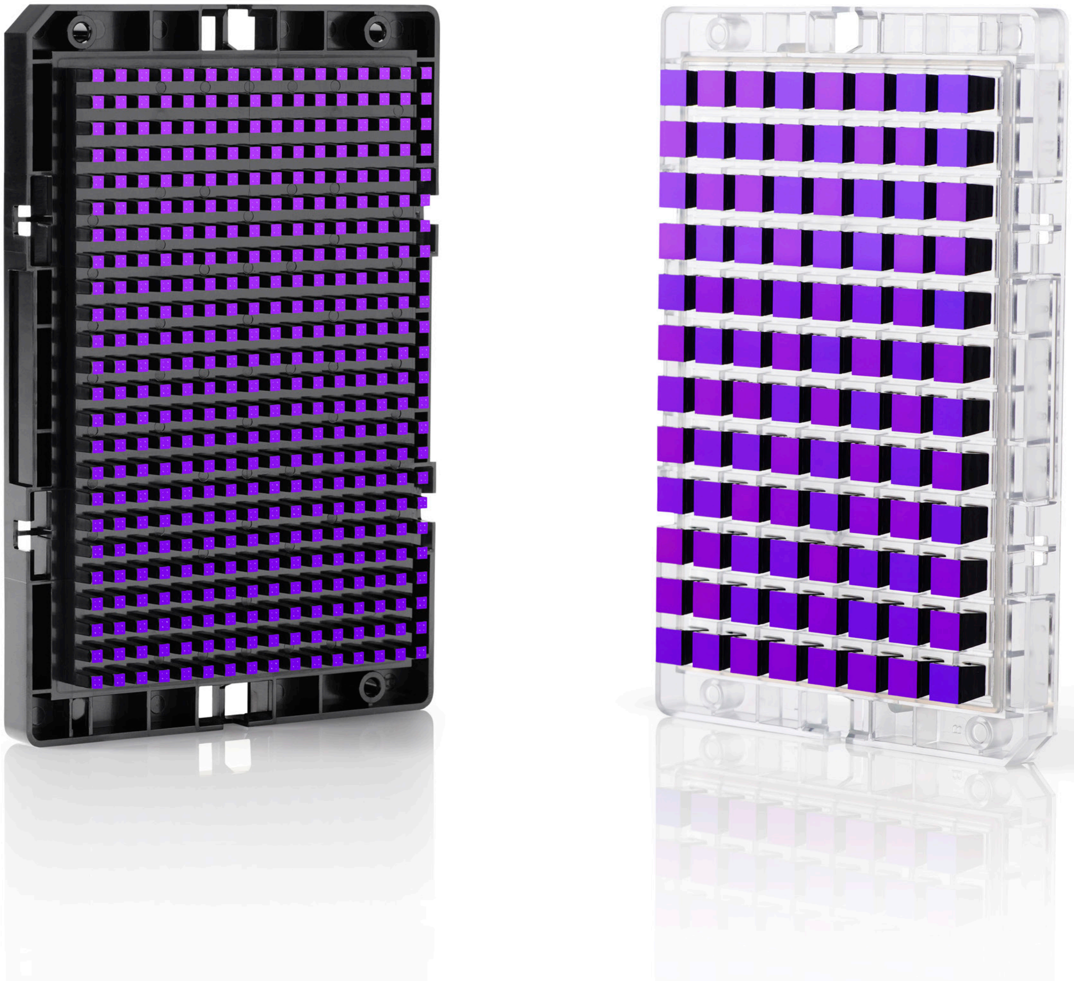

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Products may be covered by one or more of the following patents: U.S. Patent Nos. 5,445,934; 5,744,305; 5,945,334; 6,140,044; 6,399,365; 6,420,169; 6,551,817; 6,733,977; 7,629,164; 7,790,389 and D430,024 and other U.S. or foreign patents. Products are manufactured and sold under license from OGT under 5,700,637 and 6,054,270.