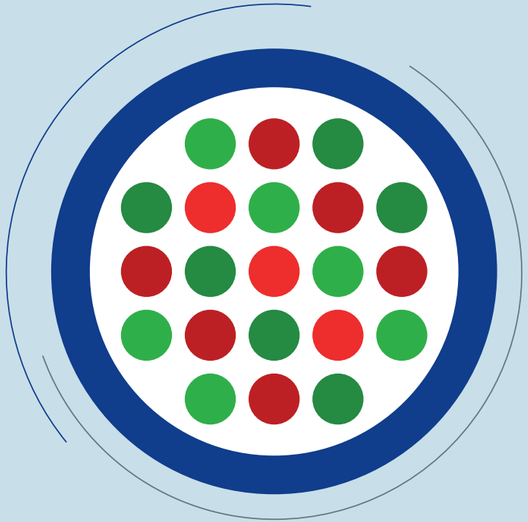
10 SECOND OVERVIEW

- **Extensive capabilities** for Illumina Infinium and Thermo Fisher Axiom array platforms, with fully integrated automation and sample extraction capabilities ensures maximum reproducibility and precision
- **Highest capacity** array genotyping service in Europe: >4M samples per year
- **Shortest turnaround** times (8-12 working days standard) to enable quicker breeding decisions and drive efficiency
- **Highly experienced** R&D teams to help implement any project at any scale, and for any species
- **Dedicated Project Management** teams support at every step



EUROFINS GENOMICS DENMARK A/S

Smedeskovvej 38 / 8464 Galten, Denmark

AG_agrigenomics_projects@genomics.eurofinseu.com

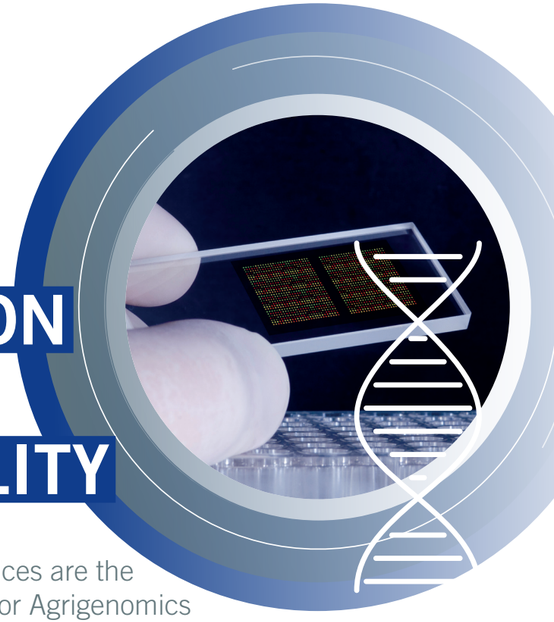
+45 7027 1170

eurofinsgenomics.com

2023_1006

eurofins | Genomics

PRECISION AND RELIABILITY



Microarray Services are the Go-To Solution for Agrigenomics

THE DNA UNIVERSE

UNLEASHING the POWER of Custom Multi-Species Arrays

In the realm of plant and animal breeding, custom multi-species microarrays have emerged as a powerful tool, revolutionizing genomic research, ideally suited to projects involving focussed sets of markers for selection or diversity studies. By consolidating sample volumes from multiple projects onto a single array design, several advantages can be made:

- **Efficiency:** Custom multi-species arrays optimize genotyping efforts by focusing only on relevant genetic markers, avoiding redundancy and data overload
- **Flexibility:** Enable access to all the benefits of custom arrays for projects of smaller sample numbers, capitalising on consolidated volumes from multiple projects
- **Cost Savings:** Targeting only essential markers across multiple species on a single array maximizes cost efficiency, reducing the need for separate single-species arrays
- **Holistic Insights:** Multi-species arrays enable researchers to perform cross-species comparative analyses, shedding light on evolutionary relationships and shared genetic traits

HOW MICROARRAYS HELP BREEDERS REACH THEIR GOALS

CHALLENGE	SOLUTION
Understanding the genetic basis of complex traits	Genome-wide association studies using microarrays allow the **identification of genetic markers linked to complex traits** involving large numbers of QTLs and across large population sets cost-effectively.
Selecting for multiple complex traits in parallel	Microarrays enable **simultaneous genotyping of tens- to hundreds of thousands of genetic markers** across the genome, facilitating the identification of markers associated with complex traits and aiding in **precise trait selection.**
Assessing and managing genetic diversity to avoid inbreeding depression and maintain genetic improvement	Microarrays offer genome-wide coverage, allowing **comprehensive analysis of genetic diversity within populations.** By assessing genetic variation across multiple individuals in parallel cost-effectively, breeders **can make informed decisions to maintain genetic health** and promote breeding programs with improved vigor and adaptability.
Accessing and exploiting genetic resources from wild relatives is a challenging task due to genomic complexity and cross-species variations	Comparison of domesticated crops and animals with wild relatives at the genomic level can be facilitated using microarrays. By identifying shared and unique genetic elements, breeders gain insights into valuable traits present in wild relatives, **enhancing the discovery of untapped genetic potential for species improvement.**