

Table 1: MaizeLD BeadChip Performance Data and Specifications

A standard cluster file is provided with the product to use as a starting point for calling genotypes. Given the complexity and diversity of maize lines, it is important to evaluate cluster positions for each data set. It is a best practice to include parental control inbred lines and their crosses for reference.

Flexibility for Multiple Applications

The MaizeLD BeadChip provides an ideal foundation for maize breeding applications, with the ability to impute additional SNPs for custom projects. Researchers can add up to 70,000 custom markers onto the MaizeLD BeadChip to support marker-assisted selection, varietal identification, genetic purity assessment, and other applications. By adding markers of interest to the base SNP content, researchers can perform all maize genotyping applications on the same platform, reducing costs.

Affordable, Standard Platform

With a focused set of SNP content containing all relevant markers, the MaizeLD BeadChip minimizes per-sample costs for EDV testing. Focused analysis produces a smaller data set compared to broader approaches, enabling seed industry researchers to make accurate EDV decisions with minimal amounts of data.

Complete Genotyping Solution

The MaizeLD BeadChip is compatible with the iScan® System. This array scanner features high-performance lasers and powerful optics systems that enable rapid scan times and precise assay detection. In addition, optional automation and the Laboratory Information Management System (LIMS) lower costs by eliminating errors associated with manual processing. Illumina genotyping products can be accessed via Illumina FastTrack™ Genotyping Services or any Illumina CSPRO® Service.

Summary

Developed through a collaboration between Illumina scientists and the seed industry, the MaizeLD BeadChip features 3047 evenly spaced SNPs for comprehensive EDV assessment. In addition,

this 24-sample BeadChip has the capacity to add thousands of custom markers, presenting a standard platform for multiple maize breeding applications.

Ordering Information

Each MaizeLD BeadChip can process 24 samples in parallel and assay 3047 markers per sample.

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