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Using genomics for high-resolution haplotype characterization and identifying novel trait-associated variation

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Maintaining genetic diversity within commercial breeding programs is essential for sustaining genetic gain over time. However, continuous selection of loci conditioning favorable phenotypes for yield reduces available diversity. Recent advances in genomic technologies have enabled cost-effective ways to monitor and track haplotype diversity at high resolution. Furthermore, low-cost, highly informative sequence information has been leveraged to enable rapid identification of genomic variation associated with relevant breeding traits. Pioneer's product development teams have utilized such genomic information to evaluate diversity within their breeding germplasm, improve marker-assisted breeding efficiency, and accelerate genetic gain.