

POWERING GENOMIC SELECTION IN AGRICULTURE.

Corn fun facts¹⁻³

An ear or cob of corn is actually part of the flower, and an individual kernel is a seed.



On average, an ear of corn has

800 in 16
KERNELS ROWS

Corn will always have an even number of rows on each cob.

1 = 8
BUSHEL OF CORN GALLONS

A bushel is a unit of measure for volumes of dry commodities, such as shelled corn kernels.



One crop. Multiple uses.

Seed corn companies have used traditional plant breeding for decades to select drought tolerance in corn.

Marker-assisted selection has been one of the genetic tools they've employed, enabling the identification of genes in corn that appear to perform better under water stress.

A corn hybrid is the result of a single cross between two inbred lines, the progeny of which is then planted and harvested.

Through the constant development of new products, we are continually innovating ways to help agricultural researchers. Genotype any species with standard sequencing panels or arrays, design your own, and access a wide range of open agriculture consortia products. Our agrigenomic technologies help plant and animal breeders and researchers identify desirable traits, leading to healthier and more productive crops and livestock.

Learn more about MaizeLD and 30 other off-the-shelf Illumina array and open consortia products at www.illumina.com/agrigenomics.

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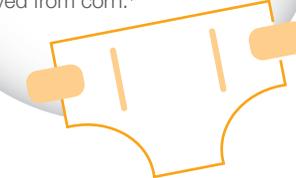
COSMETICS

Many types of skin care, hair care, eye and facial makeup, and lipsticks contain "Zea mays." Though it sounds exotic, it's actually the scientific name for corn.¹



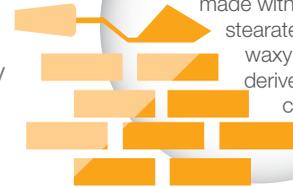
DIAPERS

Both conventional and natural diapers use corn for their absorbent properties. Natural diapers typically use cornstarch, whereas conventional diapers use the polymerization of acrylic acid blended with sodium hydroxide. Acrylic acid is derived from ethylene, which is derived from corn.¹



BRICKS

Many paving bricks and other cement products are made with calcium stearate, a white, waxy powder derived from corn.¹



JELLY BEANS

Corn is a necessary component for colored candies, like jelly beans, helping provide their vibrant colors and flavors.¹



With the exception of Antarctica,

CORN IS PRODUCED ON EVERY CONTINENT IN THE WORLD.



The United States produces

40% OF THE WORLD'S TOTAL CORN HARVEST

making it the largest maize producer in the world.²



Other major corn producing countries include China, Brazil, Mexico, and the 25 nations in the European Union:



Corn is now a completely domesticated plant, so it's unlikely to be found growing in the wild.

Corn is used as a major component in many food items like cereals, peanut butter, potato chips, soups, marshmallows, ice cream, baby food, cooking oil, margarine, mayonnaise, salad dressing, and chewing gum.



Corn and its byproducts are also found in many non-food items such as fireworks, rust preventatives, glue, paint, dyes, laundry detergent, and the manufacturing of photographic film.²



GENOMIC SELECTION FOR FASTER BREEDING DECISIONS.

Accelerate agrigenomic breakthroughs with the MaizeLD BeadChip Kit.

Illumina offers the most robust standard platform for determining essentially derived variety (EDV) status in maize. Exceeding a 99.4% call rate with over 99.9% reproducibility of 3047 SNPs, the MaizeLD BeadChip Kit provides an ideal foundation for maize breeding applications, with the ability to impute additional SNPs for custom projects. Add up to 70,000 custom markers onto the MaizeLD BeadChip array to support genomic selection, marker-assisted selection, varietal identification, genetic purity assessment, and other applications.

The MaizeLD and MaizeLD+ BeadChip Kits use the Infinium® HD Ultra assay and are compatible with the iScan® System and the HiScan® System.

High-density information at the cost of an array.

- Effective, high- and low-density screening for quick breeding decisions
- A wealth of information for genomic selection in crops
- Flexible add-on capabilities at a lower cost
- Internationally sanctioned EDV testing and utility for multiple applications
- High call rate and reproducibility

Features

- 3047 SNPs
- 70K attempted bead type add-on capacity
- 24-sample chip format
- Infinium-HD Ultra assay
- >99% call rate and 99.9% reproducibility
- All SNPs are a subset of the MaizeSNP50 content
- Available in configurations of 48, 288, and 1152 sample kits

Product	Version	Samples	Catalog number
MaizeLD	1.0	48	WG-455-1001
MaizeLD	1.0	288	WG-455-1002
MaizeLD	1.0	1152	WG-455-1003

Advance your agrigenomics research with the MaizeLD BeadChip Kit. To place an order, contact your Illumina sales representative or visit www.illumina.com/products/maize-ld-beadchip.html.

References

1. Miller S. Ten things you wouldn't think would be made from corn. <http://grub.gunaxin.com/ten-wouldnt-be-made-corn/110852>. January 19, 2012. Accessed September 1, 2015.
2. Neal A. 18 Surprising everyday items made with corn. <http://www.cheatsheet.com/life/18-surprising-everyday-items-made-with-corn.html/?a=viewall#ixzz3hnt2VWVJC>. January 18, 2015. Accessed September 1, 2015.
3. Corn Facts. http://www.soyatech.com/corn_facts.htm. Accessed September 29, 2015.

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