



Revolutionizing genetics in the cattle industry.

Extensive toolset.
Proven technology.
Collaborative approach.

illumina®

Breed success. Join the revolution.

Beef cattle with improved meat quality.
Exceptional tenderness. Better marbling.

Dairy cows with improved milk quality.
A longer production life.

This is the promise of bovine genetics.
This is the promise that is being fulfilled. Now.

Fundamentally changing business.

Accurately predicting genetic merit used to be time consuming and expensive—taking years and costing tens of thousands of dollars. Not any more. Thanks to the power of Illumina technologies, an answer can be found in days, just after birth, bringing more value to the farm.

Illumina, in collaboration with industry leaders, is making this technology accessible. Practical. Effective.

“Genetic information improves the quality of animal and food crops. The bovine model is already successful. Expanding the approach to other species will be equally beneficial.”

Jay Flatley
CEO, Illumina, Inc.



“ Developing the BovineSNP50 BeadChip was possible because of collaborative efforts from each of the bovine groups and the level of support we received from Illumina.”

Jerry Taylor
Professor of Animal Sciences and Genetics
University of Missouri-Columbia



Drive novel variant discovery by sequencing whole genomes on a single flow cell.

Products designed for you, with you.

Multiple needs. Multiple products. Multiple opportunities to bring the power of genetics to your work. Illumina has a range of microarrays designed for a variety of uses and budgets.

Developed in collaboration with worldwide thought leaders, these microarrays feature carefully selected public content, combined with exclusive content generated using Illumina's leading next-gen sequencing technology.



The BovineHD Genotyping BeadChip

More than 777,000 SNPs. The densest coverage available. The BovineHD BeadChip is the microarray for researchers who want to build cross-breed reference populations. To map traits precisely. To increase the accuracy of genetic-based net-merit prediction.

Using Illumina's latest next-gen sequencing technology, more than 20 breeds of the world's most economically important beef and dairy cattle were sequenced to provide content for the BovineHD. Temperate species. Tropical species. It's the most comprehensive genome-wide microarray available.

The BovineSNP50 Genotyping BeadChip

With greater than 54,000 evenly spaced SNPs that span the bovine genome, this is the microarray for both research and commercial applications. The BovineSNP50 supports genome-wide enabled selection, identification of quantitative trait loci, evaluation of genetic merit, and comparative genetic studies.

The Bovine3K Genotyping BeadChip

Specially designed for commercial applications, the Bovine3K features 2,900 specially selected SNPs. It's the fast, economical approach to parentage, trait ID, traceability, and genetic prediction.

Published extensively. Proven commercially.

The BovineHD and BovineSNP50 take advantage of the Illumina Infinium® HD Assay. The Bovine3K uses Illumina's GoldenGate® Assay. These are proven technologies. With industry-leading call rates and accuracy. Simple workflow. High throughput. Superior content.

The power of collaboration.

Illumina bovine microarrays are designed by the industry—for the benefit of everyone. Using a consortium-based, consensus-driven approach, we pool the combined knowledge and needs of a variety of organizations from around the world. Some of our partners include the Dairy Cattle Breed Association, French National Institute of Agricultural Research, National Association of Livestock and Artificial Insemination Cooperatives in France, University of Alberta, University of Missouri-Columbia, USDA, and Pfizer Animal Genetics.

Through the consortium, research funding goes further. Information expands. Science advances.

A model that works.

No matter what the species—or the challenges—the consortium model improves plant and animal quality. Opens new economic opportunities. Helps feed the world.

Consortia exist for a wide variety of species. Talk to your Illumina representative about how this model can work for you.

“ Our collaboration with Illumina to develop this high-density chip supports our desire to develop strategic partnerships that harness the power of genomic innovation for the benefit of the bovine research community and for our cattle producer customers.”

Nigel Evans,
Vice President of
Pfizer Animal Genetics





Get started now.

Higher grade beef. Better milk.
Improved disease and pathogen
resistance. Expanded diversity.

This is the future of bovine production.
This is the future that starts now.

Talk to your Illumina representative today or
learn more at www.illumina.com/agriculture



WORLDWIDE HEADQUARTERS

Illumina, Inc.

9885 Towne Centre Drive
San Diego, CA 92121 USA
1.800.809.4566 toll-free
1.858.202.4566 tel
1.858.202.4766 fax
www.illumina.com

For local offices and international distributors,
visit www.illumina.com/locations

FOR RESEARCH USE ONLY

© 2010 Illumina, Inc. All rights reserved.
Illumina, illuminaDx, Solexa, Making Sense Out of Life, Oligator, Sentrix, GoldenGate, GoldenGate Indexing, DASL, BeadArray, Array of Arrays, Infinium, BeadXpress, VeraCode, IntelliHyb, iSelect, CSPRO, GenomeStudio, Genetic Energy, HiSeq, and HiScan are registered trademarks or trademarks of Illumina, Inc.
All other brands and names contained herein are the property of their respective owners.
Pub No. 382-2010-024 Current as of 21 July 2010

illumina[®]