

Empowering herds
through innovation
and technology






PrecisionDNA

COGENT'S FEMALE GENOMIC TESTING SERVICE AND THE KEY TO PRECISE AND EFFICIENT BREEDING FOR FARMERS.

By taking a small tissue sample from an animal's ear, PrecisionDNA can translate it into a comprehensive, genomic prediction based on production, health and conformation to ensure the best animals within the herd are accurately defined. We sample a medium density **70K chip**, the **70K chip** provides a level of detail and reliability that producers haven't been able to access before particularly when there are breed

conflicts within an animal. This gives a far more accurate idea of the genetic potential of your heifers from as early as a few weeks old, when compared to the average 50K or 9K chip. A Parent Average (or Pedigree Index) has a typical reliability of around 30-35%, and that's without accounting for errors in parent identification. By using the **70K chip**, we can increase that reliability to 65-70%, depending on which trait we are measuring.

Did you KNOW...



IT IS IMPORTANT
TO BE AWARE OF,
AND TO IDENTIFY
NEGATIVELY
CORRELATED
HAPLOTYPES AS
THEY CAN AFFECT
FERTILITY

The Technical Benefits of Genomic Testing

The primary benefit of genomic testing is driving an **increase in genetic gain, and thus the genetic value of a herd.** The effect of genomics on genetic gain can be demonstrated using a simplified version of the 'Breeder's Equation' given by Falconer and Mackay (1996).

$$R = i \sigma_A r$$

R = Response to Selection. otherwise known as genetic gain. How much better is the next generation of animals than what is already in the herd?

i = Intensity of Selection. How high do we set the threshold below which animal aren't selected?

σ_A = Genetic Standard Deviation. What is the spread of genetics within the group to be selected from?

r = Reliability. How reliable are the figures upon which we select animals?

USING GENOMIC RESULTS IS

30%

MORE RELIABLE THAN USING PARENT AVERAGES ON HEIFER REPLACEMENTS.

BREEDING AND GENETICS SIMULATION			
	Conventional + Beef	Sexed+Beef	Sexed+Beef+Genomics
Genetic Variance (Milk Kgs)	249	249	249
Selection Intensity coefficient	0.227	0.83	0.83
Accuracy (Square Root of Reliability)	0.5	0.5	0.81
Response/Generation (Milk Kgs PTA)	28.2615	103.335	167.4027



Detect tomorrow's traits today with Precision**DNA**.

SexedULTRA 4M™

Over 90% gender accuracy

PrecisionDNA

High density genomic testing

Mastitis
SCC
CCI
Fertility

PrecisionMAP

Genetic auditing tool exclusive to customers

Profitability
Milk
Protein
Fat
Lifespan

PrecisionMATCH

Industry leading mating programme

PrecisionREPRO

Whole herd fertility service

PrecisionMAP

PrecisionMAP is an extensive data analysis of each individual cows' performance, benchmarked against the farms actual milk contract and national breed average. It ranks the herd using a financial custom index that incorporates all the factors that affect farm profitability. PrecisionMAP is a customised herd audit which shows genetic trends and a tool to help you plan for the future. It allows you to select your best genetics in the herd to use alongside a sexed and beef strategy, by selecting highest genetically valued females to breed replacements from and allocating beef semen to the rest.

THE UNIQUE
TOOL THAT
BENCHMARKS
TO YOUR FARMS
ACTUAL MILK
CONTRACT

PrecisionMATCH

PrecisionMATCH can then come into play to breed maximum potential in the next generation. New product updates coming in 2019 include Chromosomal Mating, an innovative breeding programme developed by ST Genetics. Matching the right bulls to the right females is possible because of initial genomic testing.

IDENTIFIES THE
WEAKEST TRAITS
AND SELECTS THE
IDEAL SIRE TO
CORRECT THOSE
TRAITS



MAKE YOUR OWN CHOICE

PrecisionMATCH is tailor made to reach individual breeding goals, there are no default settings. Production, health and conformation parameters are set to suit you so that every mating produces the ideal type of cow for your farm requirements. Herds are enhanced both physically and financially with weaknesses in cows reduced by careful matching with strengths in sires. Our team of dedicated, highly-trained evaluators are equipped with know-how unrivalled in the industry, backed by years of practical experience working with cows.



UK FIGURES

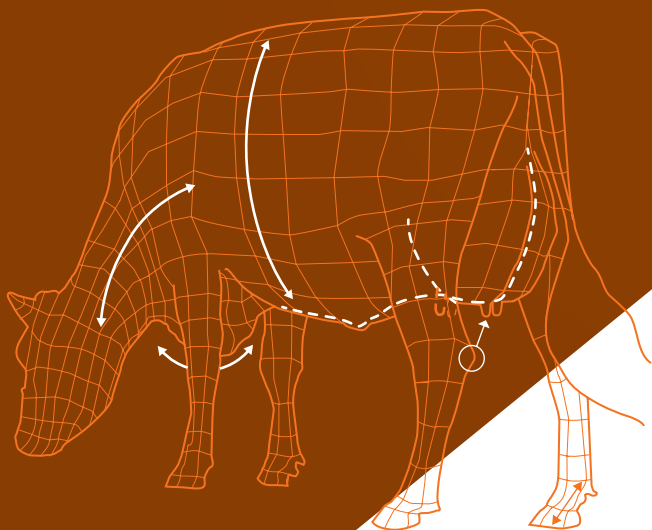
PrecisionMATCH evaluators base their assessment and mating choices on UK figures to actively manage genetic recessives, minimise inbreeding and produce more profitable cows, making the PrecisionMATCH programme more accurate, reliable and consistent for herds.



18 KEY TRAITS SCORED

With PrecisionMATCH each cow is scored against 18 key type traits. Unlike other mating programmes, PrecisionMATCH, scores locomotion, which is an animal's ability to walk with fluid movement and have full flexibility on Thurl, Hock and Pastern. Locomotion also takes into account the animals length of gait and if cow movement is anti gait. Locomotion is the only trait that is directly correlated to the lifetime yield of an animal and its ability to walk.

The difference in lifetime yield between an animal scoring 1 and a animal scoring 9 is 17,000 litres.



Combining independent evaluators, cutting edge technology and easy-to-use features we aim to ensure that your herd is genetically healthy, has genuine longevity and displays uniformity.



CHROMOSOMALTM MATING♀



Genetics in the **palm of your hand.**

Discover how to successfully combine your heifers and cows with the strongest bull line up in the world

Access additional genomic information for your herd

Maximise genomic breeding values in your offspring

Manage future inbreeding and achieve genetic gain

Control the number of mating's for each bull

Chromosomal**MATING** consists of three main components...

Our new mating software that will revolutionise the genetics market

1.

LINEAR MATINGS

Easy to use app providing real-time data for optimisation of mating's that enables farmers to score their animals.



2.

PEDIGREE BASED MATINGS

Estimate expected progeny performance based on parent averages.



3.

GENOMIC MATINGS

Optimise the use and dissemination of the best genes in the new generation.



What makes Chromosomal**MATING** different?

The goal of Chromosomal**MATING** is to optimise an economic trait while accounting for inbreeding depression.



Mating results will be calculated to increase the selected economic trait to the greatest potential for a specific group of females and bull team selected.



Programme does not maximise each mating, but optimises mating's for the entire herd.



Sexed**ULTRA** 4M™

Sexed**ULTRA 4M** is an essential product for the modern dairy farmer, with a success rate of over 90% gender accuracy. Male Sexed**ULTRA 4M Beef** and Beef Impact semen allocation complete the Ultimate Breeding Strategy. The more accurate information we know about the females in our herd the better the genetic gain in our replacements.

OVER
90%
GENDER
ACCURACY

Gain up to £250
more by breeding
a Male Beef calf

30%

SexedULTRA 4M™
Genetic Elite

20%

SexedULTRA 4M™ BEEF
90%+ Male calves

50%

Cogent BEEFIMPACT
Maximise preg rate / calf value



Precision**REPRO**

THE WHOLE HERD FERTILITY SERVICE

Increasing
conception rates by
20% can yield £65
per cow per year.

Precision**REPRO** is the reproductive solution delivering next generation, optimum herd performance. Consistency, accuracy and cutting-edge technology combine to increase herd productivity and farm profits. Precision**REPRO** takes the effort out of the heat detection and inseminating making the Cogent Ultimate Breeding Strategy an efficient and profitable journey for the customer, generating accumulative genetic gain and profit by increasing efficiencies of breeding.

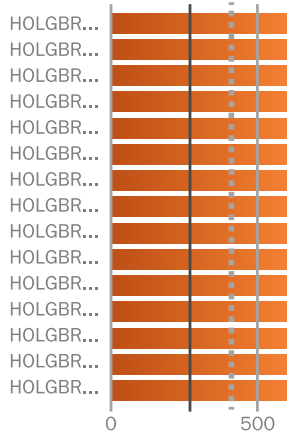
Precision**REPRO**
alone could save
you **£82 per cow**
per year

Forget confusing spreadsheets, view your genomic results in an easy to read format.

Animal Summary Example - PrecisionDNA

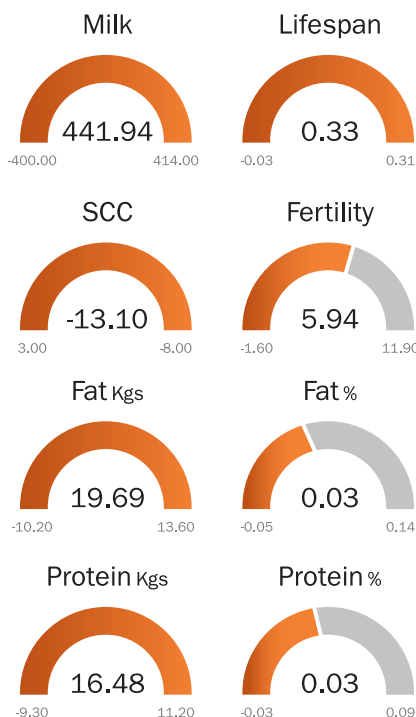
Animal Rankings

Benchmark: **Herd Average**

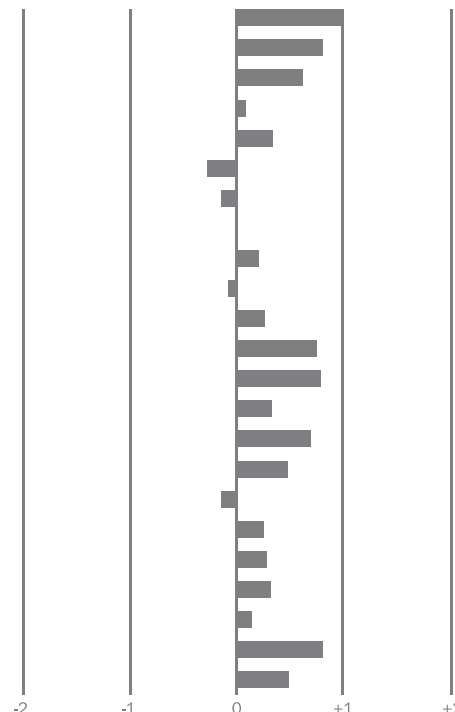


— Benchmark
 Genomic Average

Animal Filter

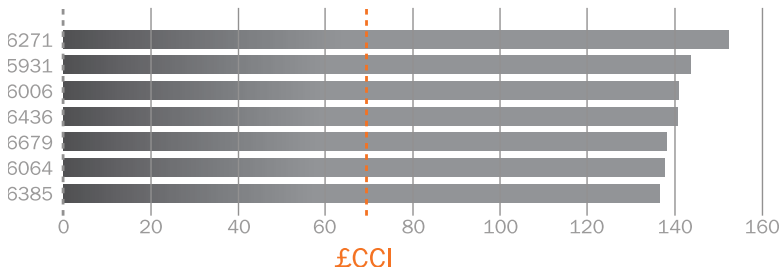


- Type Merit
- Mammary
- Legs and Feet
- Stature
- Chest Width
- Body Depth
- Angularity
- Rump Angle
- Rump Width
- Rear Leg Side
- Foot Angle
- FUA
- RUH
- Udder Support
- Udder Depth
- FTP
- Teat Length
- RTP
- TPS
- Temperament
- Ease of Milk
- Locomotion
- Condition

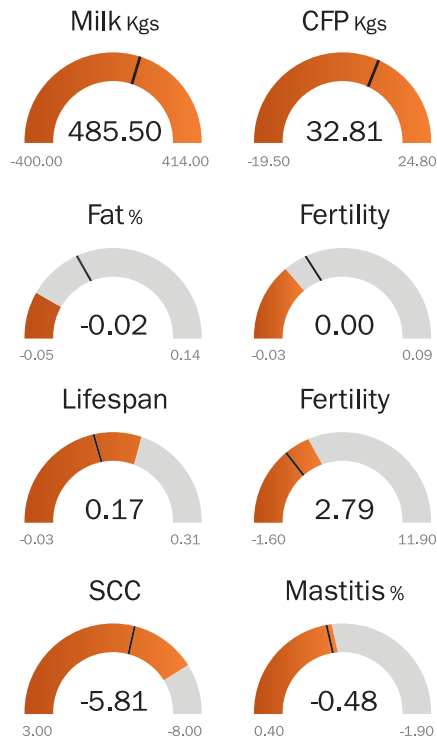
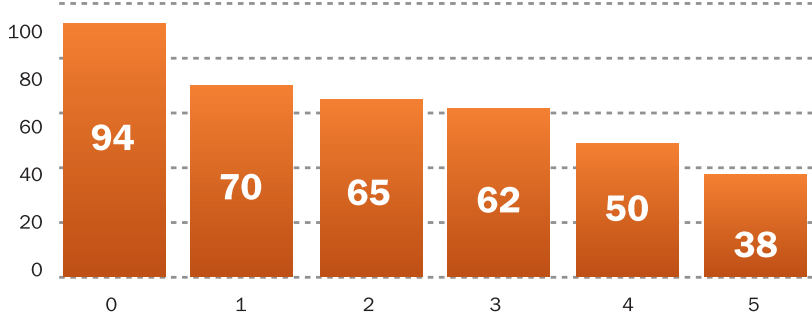


Animal Performance Example - PrecisionMAP

£CCI Rankings



£CCI Trends by Lactation



ASSUMPTIONS : 25% REPLACEMENT RATE WITH 10% OVER-PRODUCTION TO ALLOW FOR MORTALITY AND SELECTION.

	Conventional Semen + Traditional EPDs	Sexed Semen + Traditional EPDs	Sexed Semen + Genomic EPDs
Proportion Selected (Top)	56%	31%	31%
Intensity of Selection (i)	0.798	1.138	1.138
Genetic Standard Deviation (A)	163	163	163
Accuracy of Selection (r)	0.55	0.55	0.81
Generation Interval	2.5	2.5	2.5
Gain in £PLI Per Year	£28.62	£40.81	£60.10

Examples based on herd averages.



PrecisionDNA

High density genomic testing

PrecisionMAP

Genetic auditing tool exclusive to customers

PrecisionMATCH

Unique breeding programme including
ChromosomalMATING

BullPOWER

Global network of industry leading genetics

SexedULTRA 4M™

Over 90% gender accuracy

BeefIMPACT

High quality, proven beef on dairy portfolio

PrecisionREPRO

Whole herd fertility service

BREEDING INNOVATION

HOW WE CAN HELP

We take the time to listen to your requirements and find out about your business challenges, supporting you every step of the way. Our knowledgeable, highly skilled team will suggest the best combination of products and services to integrate with your farming system, enabling you to drive your herd and business forward.



www.cogentuk.com

CALL FREEPHONE: 0800 783 7258 TODAY.