



Achieve your goals faster with inside information

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National Holstein Show main sponsor Igenity provide an extensive gene marker service

Are you interested in breeding industry-leading genetics and high-value heifers or are you focussing on profitable production targets from top quality animals? Whatever the goals for your herd, IGENITY provides the inside information to help you make more confident breeding, management and marketing decisions.

Research breakthrough

IGENITY is a revolutionary new genetic profiling technology designed to give farmers, breeders and their advisors a new way to need and manage cattle, Scientist at universities and research institutions round the world have developed and validated the gene markers, which are incorporated into the IGENITY profile. These breakthroughs in DNA technology now allow producers to use the information captured in DNA to make better decisions.

Knowledge of an animal's gene markers is very useful because it enables producers to make informed selection and management decisions.

IGENITY enables breeders to

- Profile and select donor dams with the greatest potential
- Select replacement heifers of desired qualities and gain the advantage of their lifetime.
- Profile adult cows for more precise mating decisions
- Select sires of known genotype to make genetic progress in the herd.

Benefits of gene markers

The comprehensive IGENITY profile enables dairy producers to select cows that are less extreme for dairy form, an indicator of longevity without affecting productivity. Dairy form - or angularity – is closely correlated with body condition score and an even better indicator of disease frequency and productive life¹.

Research has shown that cows with high scores for dairy form are more susceptible to metabolic and reproductive diseases, and foot and leg problems². This means that forward thinking farmers can select for cows that are capable of sustaining high levels of milk production – and with the potential to do it without longevity-reducing metabolic stress and reproductive problems

Simple to perform

All that is required is a hair sample from the tail switch. At the base of the hair is the root or follicle, and the DNA contained within the hair root is analysed to determine the presence or absence of particular attributes. The IGENITY profile can be used to make highly accurate decisions about breeding and management. Farmers are also using IGENITY to make selection decisions depending on their

target market, whether they're on a liquid milk contract or receiving premiums for components.

Proven technology

IGENITY allows you to identify easily and accurately the potential for higher milk yield without sacrificing fertility. It has been proven in more than 2,800 dairy sires, validating research results worldwide³, which confirm that the genes analysed in the IGENITY profile can positively affect milk yield and composition⁴ without negatively affecting fertility³.

If your business is producing milk for processing, you can select animals that produce a higher protein yield and protein percent without a significant negative effect on somatic cell counts, productive life, or pregnancy rates.

Another practical benefit of IGENITY, essential for pedigree breeders, is the ability to determine coat colour, genes for red coat colour can be present – and virtually undetectable – in any black Holstein sire or dam and a single hair sample will enable you to identify red genes in black Holsteins.

IGENITY can improve selection, marketing and management decisions in many areas on the farm.

Producers can make genetic progress in their herd in several ways. They can breed to sires of known genotype or profile donor dams to select those with the greatest potential. Using IGENITY to select replacement heifers allows producers improve the genetic potential of their herd and use the IGENITY profile throughout the animal's lifetime.

Available from Merial

All the benefits of gene marker technology are now readily available from IGENITY, a division of Merial Animal Health. With a greatly expanded profile of gene markers, IGENITY is the most comprehensive DNA profile available to dairy producers. It provides an indication of the genetic value of breeding stock for key profit drivers such as productive life (longevity), total milk yield fat and protein content, cheese components, and even red recessive coat colour.

Results are presented in a single easy to understand certificate. For each productivity driver there is a 1 (low) to 10 (high) ranking. Higher scores indicate a higher potential for production for each of the components.

Whatever the goals for your herd, IGENITY provides the inside information to help you succeed.

For more information go to www.igenity.com or phone+44 1245 45 44 46

All the benefits of gene marker technology are now readily available. Know the genetic value of breeding stock for key profit drivers such as:

- Dairy form, an indicator of longevity and ease of management
- Total milk yield
- Fat and protein content
- Cheese components
- Red recessive coat colour

All from a single sample.

Reference

1. Dechow, et al, Journal of Dairy Science 87:3534-3541.
2. Rogers et al, 1999 Journal of Dairy Science 82:1331-1338. Genetic correlations among protein yield, productive life and type traits from the

United States and Diseases other than Mastitis from Denmark and Sweden.

3 . Blott,er al, Genetics 163:252-266.

4. Data on file at Merial.