



Which one will be
your next top producer?


CLARIFIDE[®]
Predict the future now.

zoetis[™]

It makes sense to build your herd around animals with the highest genetic potential. CLARIFIDE® now makes it practical for commercial dairy producers to take advantage of genomic testing to select and manage dairy females for the best possible return.

Although genomic testing has been available to the dairy industry for several years, it has been useful and practical for only a small number of animals. CLARIFIDE now puts this powerful tool in the hands of commercial dairy producers.

Here's what CLARIFIDE brings to your operation:

- A panel of 6,909 (6K) and more than 50,000 (50K) genetic markers from the USDA Animal Improvement Programs Laboratory (AIPL) that predict animal performance based on the most economically significant dairy traits
- Testing your herd with CLARIFIDE delivers reliable genomic data on more than 30 different production, health and type characteristics, identifies five negative haplotypes in Holstein, Jersey and Brown Swiss, as well as several composite indexes, including Net Merit (NM\$)
- Using this data, you can make more informed decisions when it comes to sire selection, reproductive strategies and overall management of your herd
- The result? Faster genetic progress, more efficient use of resources and greater return on your investment

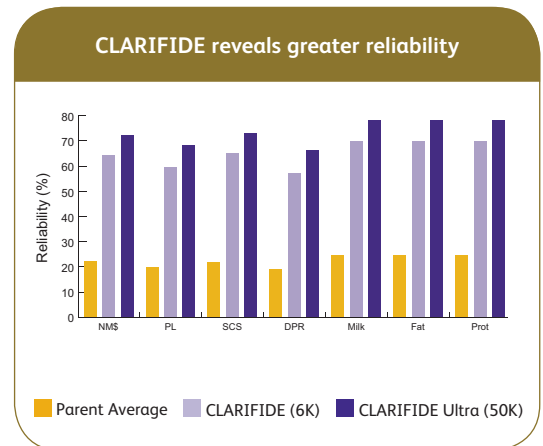
CLARIFIDE: A powerful tool for

Use CLARIFIDE® with confidence

Results from CLARIFIDE are reported as Genomic Predicted Transmitting Ability (GPTA). When it comes to predicting future performance, GPTA is a significant advancement over Parent Average. For the first time, commercial dairy producers can use the power of enhanced genetic selection with GPTA.

For most traits, it would take a cow's entire lifetime — or longer — to get enough progeny and production records to match the reliability of CLARIFIDE.

For example, the reliability of the GPTA for Productive Life (PL) is comparable with the reliability of data from 50 actual daughter records. But, with CLARIFIDE this information is available as early as birth.

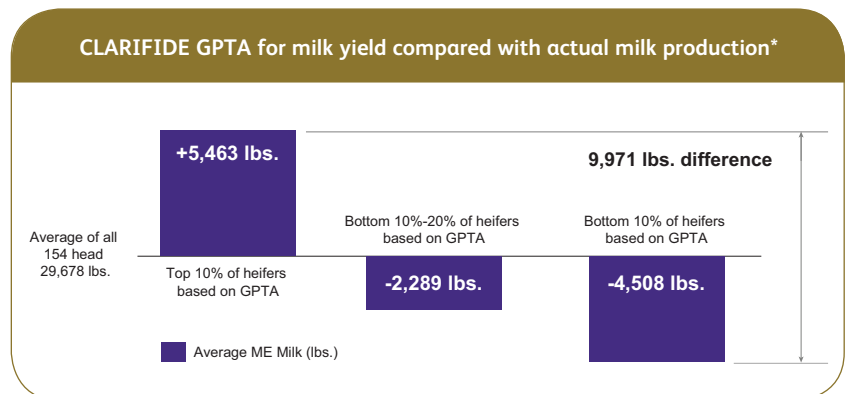


Based on 6K and 50K genotypes in Holstein cattle, Zoetis Genetics, data on file.

Spot-on predictions of future performance

Tests in commercial dairy herds demonstrate that CLARIFIDE delivers an accurate forecast of future performance. In this example from a herd in the Upper Midwest, the top 10% of heifers based on GPTA for milk yield produced 5,463 more pounds of milk, on an ME basis, than the average of their herdmates. The lowest 10% based on GPTA produced 4,508 pounds less than average.

No other tool can give you that level of accuracy when it comes to clarifying the genetic potential of your heifers and cows.



*Deviation is from herd average that includes all groups using the 3K chip.

dairy management.

Maximize your investment in replacement heifers

Consider the costs of raising a heifer from birth until freshening — a range from \$1,600 to more than \$2,000 per animal.¹

CLARIFIDE® helps you maximize your investment in replacements by providing valuable information about their potential future performance. Determining the genetic potential of both home-raised and purchased heifers allows you to take control of your herd's genetic future.



How to use CLARIFIDE to improve your herd

CLARIFIDE reveals a heifer's overall genetic potential early in life. Armed with that information, you can make management decisions accordingly. For example:

- Focus resources on high-genetic-potential females that can improve your herd more quickly
- Identify females that will deliver a higher return from advanced reproductive technologies, such as sexed semen, embryo transfer or *in vitro* fertilization
- Conversely, identify animals with lower genetic potential so you can allocate management resources accordingly
- Address genetic deficiencies that may be corrected in future offspring through mating to appropriate sires
- Better manage inbreeding without previous knowledge of the parentage of the animal (parentage errors average 20% on all herds tested by Zoetis [data on file] and some herds have up to 50%)

To take full advantage of CLARIFIDE, and help maximize your investment into replacements, test young heifers before they reach breeding age. Results can be used to make initial breeding decisions that will deliver the greatest long-term improvement in your herd. But DNA collection can be done any time it fits the protocols and goals of your operation.

CLARIFIDE includes more than 30 health, production and type traits*

- Milk Yield
- Fat Yield
- Protein Yield
- Fat %
- Protein %
- Somatic Cell Score
- Daughter Pregnancy Rate
- Heifer Conception Rate
- Cow Conception Rate
- Productive Life
- Sire Calving Ease
- Daughter Calving Ease
- Sire Stillbirth
- Daughter Stillbirth
- Individual Inbreeding
- Future Inbreeding
- Breed-specific Reproductive Haplotypes
- Stature
- Strength
- Body Depth
- Dairy Form
- Rump Angle
- Rump – Thurl Width
- Rear Legs Side View
- Rear Legs Rear View
- Foot Angle
- Feet/Legs Score
- Fore Udder Attachment
- Rear Udder Attachment
- Rear Udder Width
- Udder Cleft
- Udder Depth
- Front Teat Placement
- Rear Teat Placement
- Teat Length

*For each trait, the GPTA is reported in units specific to that trait. For example, GPTA for milk yield is expressed in pounds of milk; GPTA for productive life is expressed in months.

Composite indexes**

- Net Merit
- Cheese Merit
- Fluid Merit
- Breed Performance Index
- Type – Final Score
- Calving Ability
- Udder Composite
- Feet/Legs Composite
- Body Size Composite

**Indexes combine information on several related traits into one composite value.

Getting started

Order a CLARIFIDE® test kit

- Go to www.zoetisUS.com/genetics to access an electronic order form.
- For questions, call Zoetis Genetics Customer Service at 888-963-8471.

Collect samples

- Samples are accepted for Holstein, Jersey and Brown Swiss females
- Tissue Sampling Unit (TSU) DNA collection device by Allflex®
 - Collects a piece of tissue from an animal's ear
 - Accepted for all ages of animals
- Blood cards or whole blood samples
 - Accepted for all ages of animals
 - Not accepted for twins
 - Recommended for animals younger than 4 months of age
- Hair follicle samples
 - Must consist of 20 to 30 intact hair bulbs
 - Accepted for all ages of animals
 - For animals younger than 4 months, special care is needed to obtain adequate hair bulbs

Ship to Zoetis Genetics

- Follow shipping instructions and adhere to deadlines found on the www.zoetisUS.com/genetics website.

Analyze results and determine action plan

- CLARIFIDE results will be returned in an easily sortable Excel® report. Your Zoetis representative can help you interpret your results and incorporate the information into your overall reproductive plan.

Now you can take control of your herd's genetic future. Ask your Zoetis representative about CLARIFIDE, or visit www.zoetisUS.com/genetics.

CLARIFIDE comes from Zoetis Genetics, the leader in reproductive technologies. Experts from Zoetis are available to help you apply this innovation in your herd, analyze the results and make sound management decisions. With CLARIFIDE, you can integrate genomic testing with your other Zoetis reproductive and health management programs to get the most out of your herd's genetic potential.

¹ Stuttgart S, Kohlman T, Hoffman P, Zwald A. There's nothing equal when raising heifers. *Hoard's Dairyman* February 2008. All trademarks are the property of Zoetis Inc., its affiliates and/or its licensors. All other trademarks are the property of their respective owners. ©2013 Zoetis Inc. All rights reserved. PAG13017

4 steps to genetic improvement

- 1 Use CLARIFIDE to understand the genetic potential of your dairy females
- 2 Identify areas of improvement based on your operation's goals
- 3 Define short-term and long-term strategies to meet your goals
- 4 Monitor and measure progress



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