Media Contacts:
Cheryl Marti	Kristina Hopkins
Zoetis	Bader Rutter
608-206-0635	262-938-5577
cheryl.f.marti@zoetis.com	khopkins@bader-rutter.com

Wellness Trait Field Study Demonstrates Effectiveness of Clarifide® Plus

Peer-reviewed, multiherd study validates the effectiveness
of wellness traits to predict disease incidence in dairy cattle

PARSIPPANY, N.J., Sept. 11, 2017 — Dairy producers can confidently use Clarifide® Plus to better manage disease and improve herd profitability. First-year results from the Wellness Trait Field Study conducted by Zoetis and published online in the *Journal of Dairy Science* (published in press Aug. 30, 2017), demonstrate an association between direct genomic predictions for wellness traits from Clarifide Plus and associated disease outcomes.

Accurately predicting animals that have higher risk of disease is crucial to helping identify which animals will be more or less likely to be profitable genetically. The Dairy Wellness Profit Index® (DWP$®) can help determine which animals can be raised more efficiently to minimize labor and treatment costs and maximize profitability for the next generation. DWP$ includes mastitis and all other wellness traits, as well as production, reproduction and other economically important traits in the index.

"First-year results of the Wellness Trait Field Study provide clear evidence that the wellness trait standardized transmitting abilities (STAs) in Clarifide Plus will provide accurate estimates of future performance to help identify animals with different relative genetic risk for the wellness traits," said Anthony McNeel, senior scientist, Global Genetics Technical Services, Zoetis. "Coupling these predictions with sound management practices, Clarifide Plus provides producers with a compelling opportunity to help decrease disease incidence and improve the profitability of their herd."

First-year disease incidence results

The objective of this ongoing, multiherd, multiyear study is to estimate the association between genomic wellness trait predictions derived from Clarifide Plus and the occurrence of health events in commercial dairy cattle. The study includes Holstein females selected from 11 herds from major dairy regions across the U.S. Two-thirds of the cattle enrolled were heifers entering their first lactation and the remaining one-third observed were entering their second lactation.

Wellness trait STAs were used to rank and assign cows to percentile groups within herd and age groups: worst 25%, 26%-50%, 51%-75% and best 25%. First-year results from the Wellness Trait Field Study demonstrated the risks for six common lactating cow diseases, including mastitis, lameness, metritis, retained placenta, displaced abomasum and ketosis, were approximately two times greater in the worst 25% of animals compared with the best 25% of animals, with a range of 1.6 to 17 greater odds ratios.[1] Cows in the best 25% based on their respective genetic trait herd rankings had 47% fewer cases of mastitis, 33% fewer cases of lameness, 45% fewer cases of metritis, 64% fewer retained placentas, 94% fewer displaced abomasums and 53% fewer cases of ketosis than cows in the worst 25%.[1]

Mastitis incidence and implications
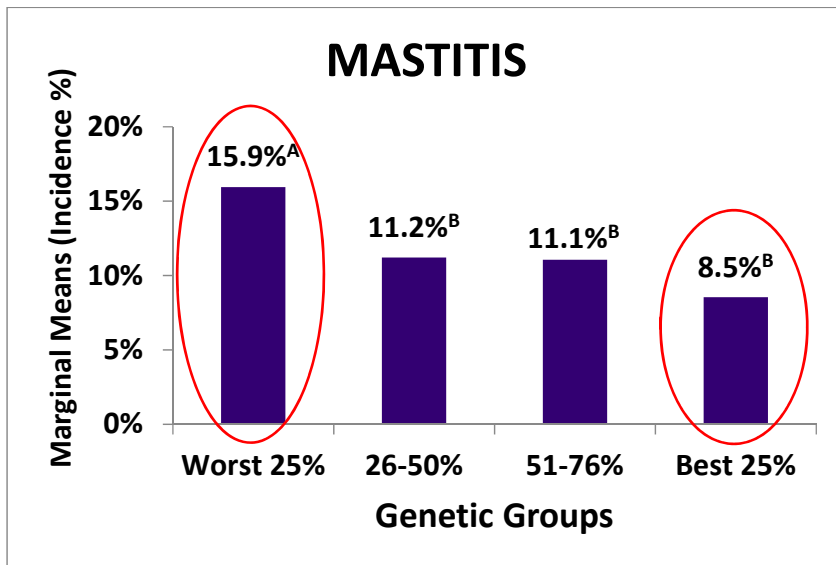
Among these diseases, mastitis represents a very interesting case study given the significant impact it has on the industry. These results effectively mean that those cows in the best 25% need half as many mastitis tubes, half as much discarded milk, half the number of days in the

hospital pen, half the time taking care of the cow and half the amount of losses in milk or animals as those in the worst 25%.[1,*]

The importance of evaluating wellness traits

"With the advent of several new genomic testing products and traits to the market, it's important that our customers have transparency and science-based data to support their choices," said Cheryl Marti, associate director, U.S. Marketing, Dairy Genetics and Reproduction, Zoetis. "Zoetis places a large emphasis on validation through research before and after products are commercially launched. The publication of the Wellness Trait Field Study and a previously published paper on the Clarifide Plus genetic evaluation in the January 2017 issue of the *Journal of Dairy Science* affirms Zoetis' commitment to Clarifide Plus. Putting product research to the test through the rigorous process of being peer-reviewed in a scientific journal provides a deeper level of transparency so producers can be confident in choosing Clarifide Plus."

Marti explained that it's important for producers to evaluate any new genetic trait through the lens of relevancy, accuracy and proven effectiveness.

- Relevant — Is the data used in the calculations from the same population of animals we are applying it to? In other words, does the data come from U.S. commercial dairies like mine? Also, are the traits economically important and do they add new information? Are they utilized in a comprehensive animal ranking index aimed at maximizing profitability?
- Accurate — Is the data derived from millions of records, edited for more accurate results and higher heritability and analyzed with cutting-edge methodology to achieve solid reliability?
- Proven — Are the methods transparent, supported by science and demonstrated effective?

About Clarifide® Plus

In response to industry needs for genetic improvement of Dairy Wellness traits, Zoetis launched Clarifide® Plus, the first commercially available, U.S.-based genomic test that provides reliable genetic assessments at an early age, in March 2016. Developed to help producers select, manage and reduce risk for costly health events, Clarifide Plus includes genomic predictions for wellness traits that provide direct indication of the genetic risk factors for six of the most common and costly animal health challenges on dairies.

Clarifide Plus derives genetic predictions based on data collected from millions of health records within U.S. commercial herds, so U.S. producers can be confident results will be relevant to their operations. Clarifide Plus predictions also are very accurate with average estimated reliability of 50% for the six disease traits in young animals.

For more information about the Wellness Trait Field Study or genomic testing with Clarifide Plus, check out an educational video on the Zoetis Genetics YouTube channel or contact your Zoetis representative. The Zoetis Genetics YouTube channel includes other helpful resources, including videos highlighting customers' experience using Clarifide Plus.

About Zoetis

Zoetis is the leading animal health company, dedicated to supporting its customers and their businesses. Building on more than 60 years of experience in animal health, Zoetis discovers, develops, manufactures and markets veterinary vaccines and medicines, complemented by diagnostic products, genetic tests, biodevices and a range of services. Zoetis serves veterinarians, livestock producers and people who raise and care for farm and companion animals with sales of its products in more than 100 countries. In 2016, the company generated annual revenue of $4.9 billion with approximately 9,000 employees. For more information, visit www.zoetisUS.com.

# # #

Download the Clarifide Plus logo.

Download a high-resolution photo of heifers.

*On a per cow basis
[1] McNeel AK, Reiter BC, Weigel D, Osterstock J, Di Croce FA. Validation of genomic predictions for wellness traits in US Holstein cows. *J Dairy Sci.* 2017;100:1-10. doi: 10.3168/jds.2016-12323