



Updated CLARIFIDE Plus Key Messages:

- Mastitis, lameness, metritis, retained placenta, ketosis, displaced abomasum and other health events referred to as wellness traits have a significant impact on herd health, saleable milk and overall herd profitability.
- Profitability is enhanced when the dairy has the advantage of mature cows that are productive for multiple lactations. To reach this longevity, cows must stay healthy and be reproductively sound, in addition to producing milk. Until now, management practices were the primary way to help cows either avoid or survive these health events.
- CLARIFIDE Plus represents the first commercially available dairy genetic evaluation specifically designed for cow and calf wellness traits in U.S. Holstein dairy cattle. Dairy producers can now genomically select for healthier heifers through calf wellness traits at an early age to help build a healthier herd.
- CLARIFIDE Plus is the only genomic test that allows Holstein producers to rank animals with the Dairy Wellness Profit Index® (DWP\$®) based on traits that affect health, performance and lifetime profit of cows AND now calves.
- The use of Dairy Wellness Profit Index (DWP\$) would be expected to offer similar selection emphasis to that achieved by Net Merit (NM\$) on core traits, making it a practical consideration for producers that have historically used NM\$, but would apply additional selection emphasis on cow and calf wellness traits to change rankings and increase the amount of profitability identified and possible over their lifetime.
- CLARIFIDE Plus provides accurate genetic predictions for six cow wellness traits and three new calf wellness traits derived using cutting edge genetic evaluation methodology applied to data collected from millions of health records within U.S. commercial herds. Reliabilities resulting from CLARIFIDE Plus are 50 percent or more on young genomic tested heifers for the six cow wellness traits¹ and approximately 39% for the three calf wellness traits² on young genomic tested calves.
- Higher genomic values are more desirable for all wellness and calf wellness traits, thus selecting for a high Standardized Transmitting Abilities (STA) will apply selection pressure for reduced risk of disease.
- In addition to wellness traits, CLARIFIDE Plus includes results for the Zoetis proprietary Polled trait.
- DWP\$ includes production, reproduction, functional type, longevity, calving plus Zoetis cow and calf wellness traits, including polled test results.
- Wellness Trait Index® (WT\$®) focuses on the wellness traits (Mastitis, Lameness, Metritis, Retained Placenta, Displaced Abomasum and Ketosis) in addition to Polled and estimates difference in expected lifetime profit associated with risk of these diseases.
- DWP\$ differs from other economic indexes because it includes direct predictions for economically important diseases in cows and calves. By including more characteristics affecting profitability, DWP\$ describes more variation in profitability than other indexes. In addition, inclusion of the calf wellness traits creates an opportunity for producers to realize part of the lifetime economic gains

earlier in life—as early as near birth, occurring approximately nine months after implementing breeding selection strategies

- With the use of DWP\$, producers can make approximately \$47 more profit per selected female over 10 years using a 15% culling selection strategy, as compared to a lower-cost CLARIFIDE test. The difference is even higher in favor of DWP\$ when compared to lower reliability tests at low cost.²

Frequently Asked Questions

Q: What health events will be covered by wellness trait and calf wellness trait predictions?

A: Common diseases in adult dairy cattle including mastitis, lameness, metritis, retained placenta, displaced abomasum and ketosis are part of the wellness trait offering. New calf wellness traits include the most common calfhood diseases including calf scours and respiratory plus a measurement of calf livability.

Q: How do I get information for the new Calf Wellness traits on my animals?

A: If you've been using CLARIFIDE® Plus, animals previously tested with CLARIFIDE Plus will receive these new results as part of their previous purchase. These new traits may be found by using Enlight® or waiting for the CW\$™ to update in select on-farm software programs. For herds that have tested with CLARIFIDE in the past, please order the Wellness Trait upgrade for previously CLARIFIDE tested animals. You may request an All Animals report to help you if this will be a large group of animals. Please talk to your Zoetis rep and our customer service team for assistance.

Q: Why do I need DWP\$®?

A: There are several reasons to utilize DWP\$ in an effective genetic management strategy:

- DWP\$ provides comprehensive, relevant, accurate and proven information on wellness traits and new calf wellness traits to provide clarity and opportunity to make more profitable animal rankings and decisions for the entire herd.
- By including more characteristics affecting profitability, DWP\$ describes more variation in profitability than other indexes.
- The use of DWP\$ would be expected to offer similar selection emphasis for production, reproduction and functional type traits as NM\$, but with additional selection emphasis and improvement on cow and calf wellness traits.

Q: As a dairy producer, if I select cattle based on their calf wellness trait or wellness trait profile, does that mean that they won't get mastitis, metritis, scours, etc.?

A: Risk of disease is influenced by genetic and environmental factors. CLARIFIDE Plus describes differences in the genetic risk factors, but genetic selection will not compensate for suboptimal management practices that may cause animals with apparent lower risk of disease to get sick. Producers should continue to use best management practices to prevent disease and apply CLARIFIDE Plus as another tool to improve dairy wellness.

Q: How long before I see a benefit to using these wellness traits?

A: The rate of genetic progress depends on four factors – selection intensity, genetic variation, accuracy and the generation interval. Herds can make faster genetic progress by using DWP\$ due to higher genetic variation compared to NM\$ and greater ability to identify animals with the potential for more lifetime profit and should be kept as replacements or generate offspring from.

Q: How can I justify the investment in CLARIFIDE Plus?

A: The combination of wellness trait information and economic implications delivered through DWP\$ provide dairy producers with powerful information that can be used to help build a healthier, more productive and profitable herd, from calves to cows. With DWP\$, producers get a more comprehensive ranking because of the additional differences in profitability described by including direct predictions for economically important health events in cows such as mastitis, lameness, metritis, etc., plus calf livability, scours and respiratory. By including more characteristics affecting profitability, DWP\$ (offered only in CLARIFIDE Plus) describes more genetic variation in profitability than other indexes.

Q: How can I order the wellness trait predictions or find additional information?

A: Currently, CLARIFIDE Plus is only available for use in Holstein cattle. Holstein producers can order the CLARIFIDE Plus test through the order form at www.clarifide.com or via Enlight® www.enlightdairy.com. For more information, contact Zoetis Genetics Customer Service at 877-233-3362 or your Zoetis representative.

1 Vukasinovic N et al. (2017) Development of genetic and genomic evaluation for wellness traits in US Holstein cows. *J. Dairy Sci.* 100:428-438.
2 Data on file, January 2018, Zoetis Inc.

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