



WELLNESS IS A PROFITABLE CHOICE

DAIRY PRODUCERS CAN GENETICALLY SELECT HEIFERS TO BUILD A HEALTHIER HERD

With CLARIFIDE[®] Plus, there is a way to improve health genetically with direct predictions of disease risks and selection indexes that balance selection emphasis based on the cost of disease. This single genetic test provides U.S. Holstein producers with highly relevant information as they seek to improve the health, productivity and profitability of the cattle they care for.

With CLARIFIDE Plus, dairy producers can:

Use cow and calf wellness trait genomic information for more comprehensive heifer selection and breeding strategy decisions.

Aspire to create a healthier, more trouble-free herd over time.

Positively impact profitability, including traits that can help improve all six key drivers of net farm income including net herd replacement cost, 21-day pregnancy risk, heifer survival rate, energy corrected milk (ECM) shipped, somatic cell count and death loss (in cows).¹



AVOID THE HEALTH EVENTS THAT IMPACT PROFITABILITY

Mastitis and lameness are just a few of the serious health events which have a significant impact on herd health, saleable milk and overall profitability in cows, in addition to being a drain on human resources and increasing treatment costs. Profitability is enhanced by having more 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. Table 1 shows a combined view of various study estimates for incidence, cost per health case event, and increased culling risk for the health events associated with wellness traits.

TABLE 1: IMPACT OF HEALTH EVENTS

	Incidence/Lactation Range	Cost (\$) per Case	Culling Risk ¹
Mastitis	12 – 40% ^{2,3,4,5,9,14}	\$155 – 224 ^{5,9,10}	32.7
Lameness	10 – 48% ^{3,5,7,14}	\$177 – 469 ^{5,8}	16 ³
Metritis	2 – 37% ^{2,4,11,12,14}	\$300 – 358 ^{11,12}	17.1
Retained Placenta	5 – 15% ^{2,3,4,5,12,13}	\$206 – 315 ^{5,13}	31.7
Displaced Abomasum	3 – 5% ^{2,3,4,5,14}	\$494 ⁵	26.9
Ketosis	5 – 14% ^{2,4,5,14}	\$117 – 289 ^{5,6}	32.5

ECONOMIC IMPORTANCE OF CALF WELLNESS

Keeping dairy calves healthy and minimizing mortality and morbidity are key investments with real future returns. National Animal Health Monitoring System (NAHMS) studies show pre-weaning death losses of 7.8% and the reasons for those losses: 56.5% due to scours, and 22.5% due to respiratory diseases.¹⁵ The calf wellness trait information helps identify and select for calves less likely to become ill due to scours or respiratory disease, as well as animals that are more likely to survive the first year of life and achieve their full potential lifetime value.

TABLE 2: IMPACT OF CALF HEALTH AND MORTALITY

	Incidence (Pre-weaned) ¹⁵⁻¹⁷	Incidence (Weaned)	Treatment & labor costs (\$) per case (pre-weaned)
Calf Scours	23.9 – 25.3%	0.8 – 1.8% ^{15,16}	\$11.35 ^{*19}
Calf Respiratory	12.4 – 18.1%	5.9 – 11.2% ^{15,16}	\$9.84 – 16.35 ^{19,20,21}
Calf Mortality	4.2 – 12.0%	1.8 – 2.8% ^{16,18}	Cost of raising or replacing

THREE POWERFUL SELECTION INDEXES

MAXIMIZE PROFIT POTENTIAL

To support selection for reduced risk of disease, three economic-based selection indexes were developed.

- DAIRY WELLNESS PROFIT INDEX® (DWP\$)®**
 This all-encompassing, multi-trait selection index includes production, reproduction, functional type, longevity, calving, plus Zoetis cow and calf wellness traits and Polled test results. Use this index to rank animals and apply to your selection strategies.
- WELLNESS TRAIT INDEX® (WT\$)®**
 This selection index focuses exclusively on cow wellness traits (mastitis, lameness, metritis, retained placenta, displaced abomasum, ketosis and Polled) and directly estimates potential profit contribution of the wellness traits only.
- CALF WELLNESS INDEX™ (CW\$™)**
 This selection index exclusively focuses on calf wellness traits of calf livability, calf respiratory disease and calf scours. It estimates the differences in expected lifetime profit associated with the risk of calfhood diseases and early death losses.

DWP\$ is simple and easy-to-use, while providing a comprehensive way to rank animals for profitability. And if you prefer a custom index, WT\$ and CW\$ are excellent choices to incorporate into your new index via Enlight®.

POWERED BY COMMERCIAL COW AND CALF DATA FROM HERDS LIKE YOURS.

CLARIFIDE® Plus derives genetic predictions based on data collected from millions of health records within U.S. commercial herds, leading to average reliabilities of 50 or greater on cow wellness traits, and average 39 on the three calf wellness traits (Table 3).

CLARIFIDE Plus predictions are expressed as genomic Standardized Transmitting Abilities (STA).

- A value of 100 represents average expected disease risk.
- Higher values are more desirable for wellness traits, thus selecting for a high STA will apply selection pressure for reduced risk of disease or improved calf livability.

TABLE 3: AVERAGE RELIABILITY AND AVERAGE, MINIMUM AND MAXIMUM GENETIC VALUES FOR COW AND CALF WELLNESS TRAITS*

	Average Reliability	Average Score (STA)	Minimum Score (STA)	Maximum Score (STA)
Wellness Traits²²				
Mastitis	52	100	76	115
Lameness	52	100	73	115
Metritis	51	100	75	115
Retained Placenta	51	100	71	116
Displaced Abomasum	50	100	69	111
Ketosis	51	100	72	113
Calf Wellness Traits²³				
Calf Livability	42	100	66	116
Calf Respiratory	36	100	83	116
Calf Scours	39	100	85	117

*Numbers reflect data from Reference population of animals under two years of age

In addition to wellness traits, CLARIFIDE Plus includes the Zoetis proprietary Polled test results, that will indicate animals as either tested homozygous polled, polled carriers, tested free of polled or indeterminate.



GREATER LIFETIME PROFITABILITY

- DWP\$® identifies greater genetic variation around profitability than other industry indexes due to greater description of actual disease risk for cows and calves.
- The expected population difference in lifetime profitability between the top 10th percentile and bottom 10th percentile of animals ranked by DWP\$ is approximately \$1,300.²³

Using DWP\$ for selection decisions can have important financial impacts on the dairy by increasing expected profit per cow.

Selecting heifers based on DWP\$—available only through CLARIFIDE® Plus—helps build a healthier, more profitable herd.

To learn how CLARIFIDE Plus and CLARIFIDE Ultra Plus can help you achieve a healthier, more trouble-free herd, contact your Zoetis representative today or visit clarifideplus.com.

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Our goal is to help you achieve all of yours. On your operation, every outcome—from improved reproduction to quality milk—affects your success. And we'll be there to help you develop programs and solutions to improve those outcomes. Because that's how, together, we'll achieve Dairy Wellness.

DAIRY WELLNESS MAKES A DIFFERENCE™

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