CLARIFIDE® PLUS OFFERS INNOVATIVE GENETIC PREDICTIONS FOR DAIRY WELLNESS TRAITS

KEY TAKEAWAYS:

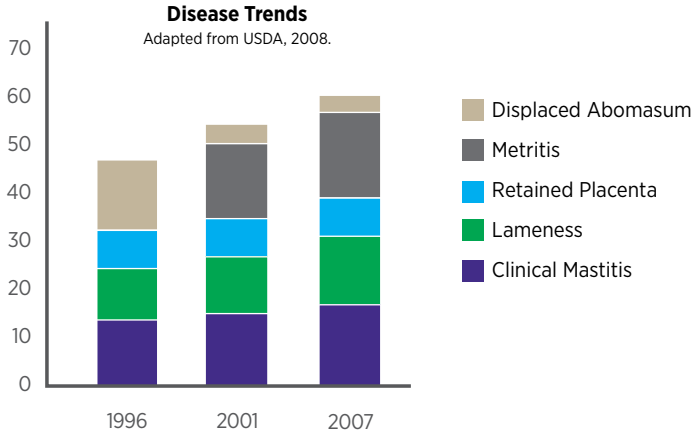
- Prevention and treatment of events that adversely impact animal health require dairy producers to invest significant time, energy and finances, not to mention the cost of lost production and the risk of mortality
- CLARIFIDE® Plus from Zoetis offers dairy producers the opportunity to more accurately identify and genetically select heifers based on wellness traits including mastitis, lameness, metritis, retained placenta, displaced abomasum and ketosis
- In addition to individual trait results, CLARIFIDE Plus provides two indexes—Dairy Wellness Profit Index™ (DWP$™) and Wellness Trait Index™ (WT$™)—that describe differences in lifetime productability attributed to genetic risk for wellness traits

Adverse health events continue to have a significant impact on herd health, longevity and producer profitability. Table 1 shows estimates of the financial impact of adverse health events on dairy production.

TABLE 1: IMPACT OF HEALTH EVENTS

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

Figure 1. Producers can help reduce incidence of these events in their herd by using genetic selection strategies to reduce risk of disease.



Improving wellness traits through genetic selection presents a compelling opportunity for dairy producers to help manage disease risk and improve profitability when coupled with sound management practices.

DEVELOPMENT OF FIRST U.S.-BASED DAIRY WELLNESS GENOMIC PREDICTIONS HELPS IDENTIFY MORE TROUBLE-FREE COWS

Genetic evaluation and selection in dairy cattle has traditionally focused on production traits such as milk and protein rather than direct predictors of wellness. But producers have been asking for more ways to make their lives easier and more profitable by having more healthy, longer lasting cows. CLARIFIDE® Plus now delivers on that request.

CLARIFIDE Plus offers U.S. Holstein producers a simple, comprehensive way to combine wellness and other genetic trait predictions into economic-based indexes that measure profitability based on direct genetic predictions for adverse health events.

These indexes include:

- Dairy Wellness Profit Index™ (DWP$™): A multi-trait selection index which includes production, fertility, type, longevity and the wellness traits, including Polled test results.
- Wellness Trait Index™ (WT$™): This selection index focuses exclusively on the wellness traits (mastitis, lameness, metritis, retained placenta, displaced abomasum, ketosis and polled) and estimates expected differences in lifetime profitability related to them.

BASED ON A LARGE, INDEPENDENT U.S. COMMERCIAL HERD DATABASE

Wellness trait predictions from CLARIFIDE Plus provide unique genomic information that enables dairy producers to include differences in risk of disease as criteria for selecting replacement animals.

Zoetis developed the genomic predictions for wellness traits based on an independent database of pedigrees, genotypes, and production and health records assembled from records of nearly 20 million health events from U.S. commercial dairies and internal assets.

These millions of records were the basis for establishing average Wellness Trait reliabilities of 49 – 51 with ranges from 18 to 65 (Table 2). Wellness traits are expressed as Standard Transmitting Ability (STA), where 100 represents average expected disease risk. Higher values are desirable for all traits. Ranges can be found in Table 2.

TABLE 2: AVERAGE RELIABILITY AND AVERAGE, MINIMUM AND MAXIMUM GENETIC VALUES FOR WELLNESS TRAITS*

Dairy Wellness Traits	Average Reliability	Average Score	Minimum	Maximum
Mastitis	51	100	76	115
Lameness	50	100	73	115
Metritis	49	100	75	115
Retained Placenta	50	100	71	116
Displaced Abomasum	49	100	69	111
Ketosis	50	100	72	113

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

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