

Dairy Wellness Profit Index[®] enhancements for profitable genetic selection and helping sustainable practices.



Genetically Select Heifers To Build a Healthier Herd

CLARIFIDE[®] Plus continues to evolve by providing more relevant results for herd improvement. You have the ability through selection indexes to balance revenues from your operations and health costs with additional insights. This single genetic test provides U.S. Holstein and Jersey producers with highly relevant information tailored to their specific breed of dairy cattle.

CLARIFIDE Plus is the first genomic test in the U.S. that delivers information on all eight cow wellness traits — mastitis, lameness, metritis, retained placenta, displaced abomasum, ketosis, milk fever and respiratory disease — three calf wellness traits — calf livability, respiratory disease and scours — and three fertility traits — cystic ovary, abortion and twinning — in one comprehensive offering. These genetic predictions are based on data from millions of health records within U.S. commercial herds.

Lifetime Profitability Rankings Validated

Lifetime profitability rankings from the Dairy Wellness Profit Index[®] (DWP\$[®]) from Holsteins has shown that on average, cows in the best 25% had \$1,474 more Income Over Feed Cost (IOFC) when compared to the worst 25%.²

With CLARIFIDE[®] Plus, Dairy Producers Can:



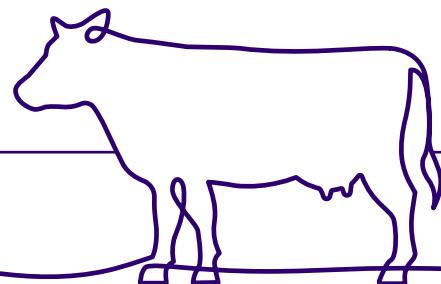
Use cow wellness, calf wellness and fertility trait genomic information through DWP\$[®] for a more comprehensive heifer selection and breeding strategy decisions.



Help drive improvement in disease incidence and animal welfare through genetic selection¹



Positively impact profitability, by including traits that can help improve all 10 key drivers of net farm income: net herd turnover costs, herd size, pregnancy rates, heifer survivability and inventory, energy corrected milk (ECM) per cow and herd, somatic cell count and death loss and labor.³



Three Powerful Selection Indexes

Maximize profit potential while supporting sustainable practices

Available only through CLARIFIDE® Plus, DWP\$ is a comprehensive, easy way to rank animals for expected profitability. The index has been updated to include additional traits and new economic assumptions to drive increased value on farm. To enable decision making and planning, producers can easily access their results through either Enlight® or SearchPoint®.

1

Dairy Wellness Profit Index® (DWP\$®)

This all-encompassing, multi-traits selection index is focused on the overall lifetime merit of the dairy cow and sustainability drivers of an operation. You can optimize genetic selection based on Quality Production, Fertility, Antibiotic Stewardship, Precision Nutrition and Animal Welfare.

2

Wellness Trait Index® (WT\$®)

The WT\$ focuses exclusively on the value of cow wellness traits including mastitis, lameness, metritis, retained placenta, displaced abomasum, ketosis, respiratory disease and polled. The index estimates potential profit contribution of these wellness traits only.

3

Calf Wellness Index® (CW\$®)

This selection index emphasizes the importance of calf wellness traits including calf livability, respiratory disease and scours. It estimates the differences in expected lifetime profit associated with the risk of calthood diseases and early death losses.

Build a Productive and Profitable Herd with CLARIFIDE Plus

Quality Production

CLARIFIDE Plus gives you the information you need to identify the cows most likely to be high producers of milk, fat and protein. Selecting for these traits and energy corrected milk per cow at the herd level can help drive the financial success of the dairy.

Fertility

Fertility traits from CLARIFIDE Plus, including cystic ovary, cow abortion and twinning, can help producers select for cows most likely to incur fewer days open to help support a more profitable reproduction cycle and improve net herd turnover cost.

Precision Nutrition

With susceptibility to diseases like scours and ketosis built and direct predictors for feed intake in BDC and RFI built into DWP\$, CLARIFIDE Plus can help you adjust your nutrition plan for the genetics of your herd.

Antibiotic Stewardship

CLARIFIDE Plus offers calf respiratory, cow respiratory, metritis and mastitis traits to help identify animals with a genetic risk for these diseases. Reducing the incidence of these health events through long term genetic selection and corrective matings allows dairy producers to reduce the amount of antibiotics they use in their herd. Not only can this help improve somatic cell count and milk quality, but heifer survival and inventory management as well.

Animal Welfare

CLARIFIDE Plus delivers a variety of wellness traits, including lameness and cow and calf livability and the polled condition, to provide key indicators of a cow's projected overall well-being and help improve overall animal welfare. With this selection, on-farm teams can work toward decreased death loss and net herd turnover costs with overall better animal husbandry.

Inside The Indexes: WT\$[®], CW\$[®] AND DWP\$[®]

WT\$ is comprised of eight* cow wellness traits while CW\$ is made up of three calf wellness traits. DWP\$ brings these two indexes and the rest of the relevant traits in CLARIFIDE Plus together to create one easy-to-use ranking index. Each index (Charts 1-6) combines the underlying traits into a single value that reflects the economic impact and incidence on farm to convey the expected profitability of each animal.

Chart 1: Jersey CW\$[®] Relative Value (%)

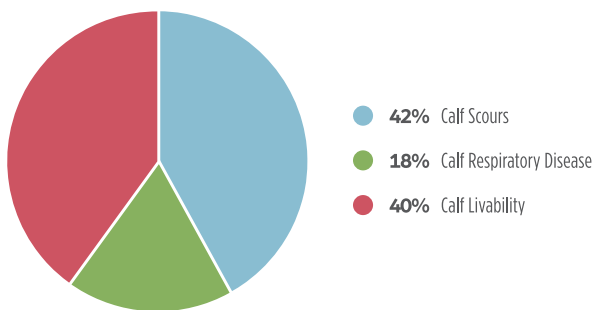


Chart 4: Holstein CW\$[®] Relative Value (%)

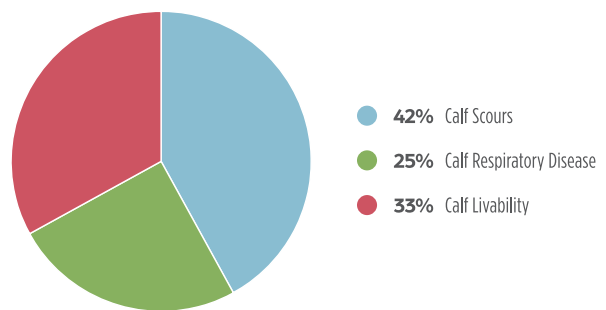


Chart 2: Jersey WT\$[®] Relative Value (%)

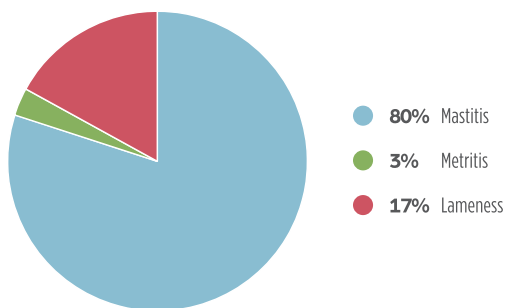


Chart 5: Holstein WT\$[®] Relative Value (%)

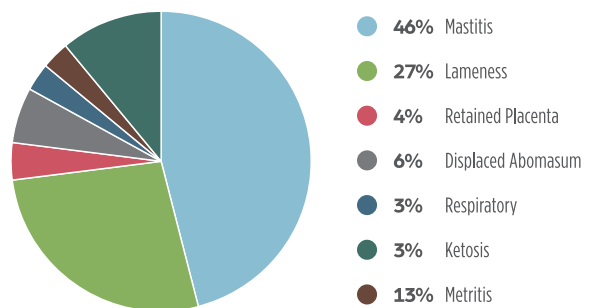


Chart 3: Jersey DWP\$[®] Relative Value (%)

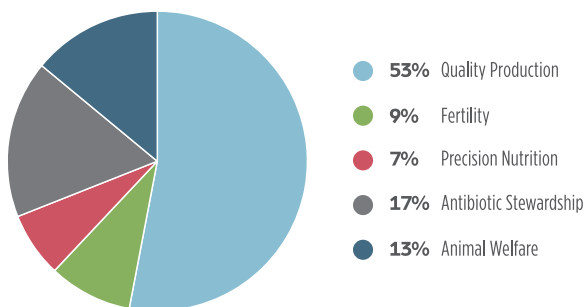
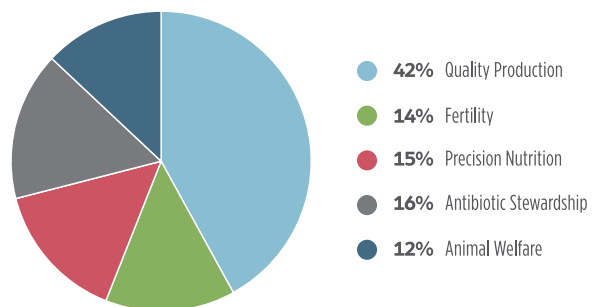


Chart 6: Holstein DWP\$[®] Relative Value (%)



Association Between DWP\$® Predictions and Lifetime Performance

Zoetis is committed to providing producers with proven solutions, we updated our 2020 analysis and documented the effectiveness of DWP\$ (Fessenden et al 2020).

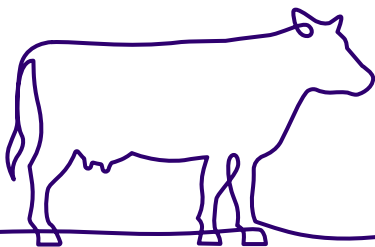
Four large herds (n=7,810 enrolled cows) in the United States were chosen for this analysis² because they had: (1) genomic predictions from females born in 2011-2014, (2) recorded production, reproduction and health events to estimate profit per cow (3) at least 200 animals born in 2011. Herd records were used to calculate lifetime energy corrected milk and income over feed cost based on the actual performance from first freshening through when they left the herd; for cows that were still in the herd, current totals were used.

The table to the right shows that when ranked by DWP\$ 2022, the best 25% of females produced 21,998 pounds more lifetime ECM per cow than the worst 25%. This additional lifetime ECM represents \$1,474 additional Income Over Feed Cost (IOFC) per cow in the best 25% of females than the worst 25%. The economic updates and the incorporation of residual feed intake and early first calving to DWP\$ 2022 demonstrate increased accuracy for DWP\$ predictions of actual lifetime profitability.

CLARIFIDE Plus DWP\$ Ranking	DWP\$ GPTA Value (\$)	Lifetime ECM (lbs.)	Lifetime IOFC per cow (\$)	Lifetime Days in Milk (days)
76-100% (Best)	618	79,263 ^a	5,194 ^a	873 ^a
51-75%	429	72,404 ^b	4,700 ^b	821 ^b
0-25% (Worst)	295	66,422 ^c	4,328 ^c	763 ^b
0-25% (Worst)	90	57,265 ^d	3,720 ^d	680 ^c
Difference Between Best and Worst	528	21,998	1,474	193

^{a-d}Least Squares Means within column and DWP\$ ranking with different superscripts diff (p<0.05)

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



¹ Fessenden B, Weigel DJ, Osterstock J, Galligan DT, Di Croce F. Validation of genomic predictions for a lifetime merit selection index for the U.S. dairy industry. Slide 20, October 2020, Zoetis Inc.

² Data on file, Zoetis, January 2022

³ Data on file, Dairy Scorecard Project no. 14CARGOTH01, Zoetis Inc.

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