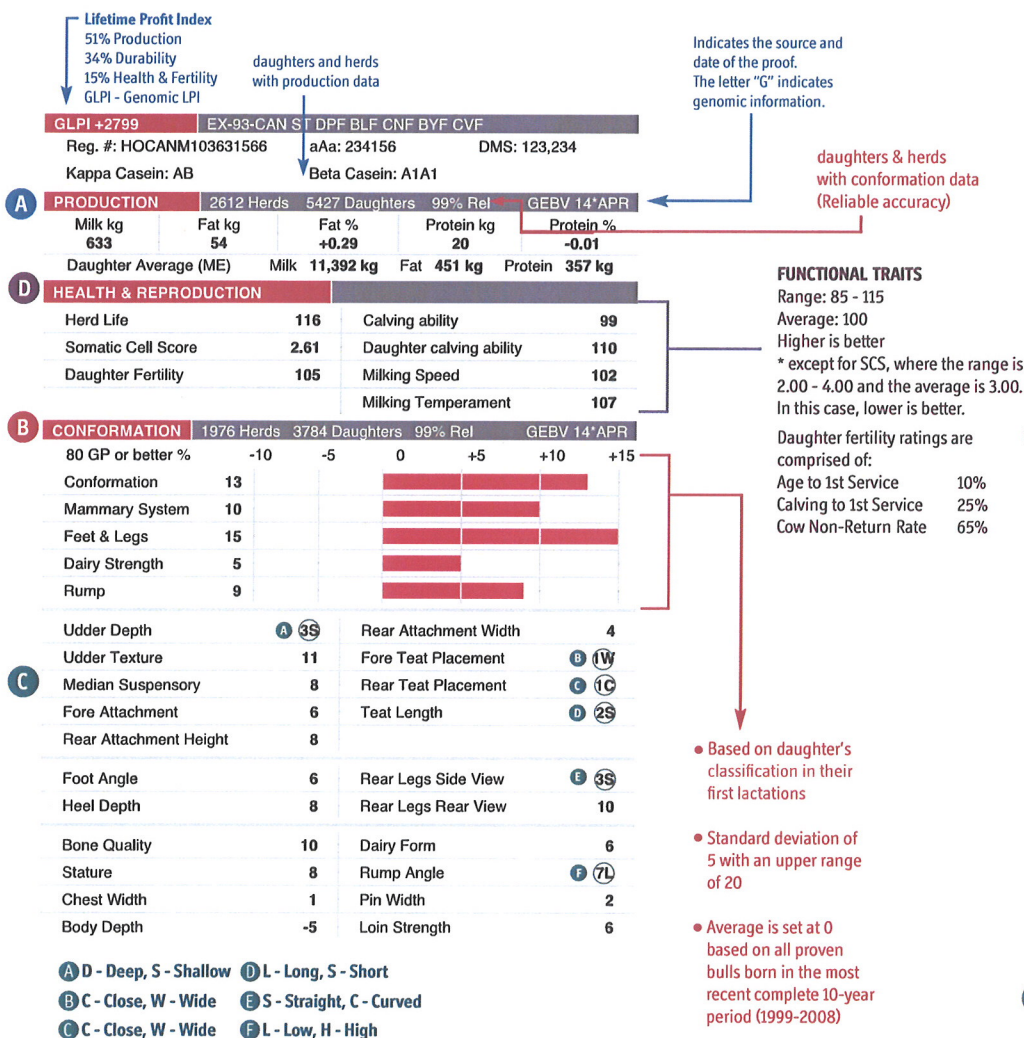


UNDERSTANDING CANADIAN SIRE PROOFS



LIFETIME PROFIT INDEX - The LPI provides a single rating of the overall genetic merit of a sire based on the production, conformation and auxiliary traits known to affect longevity, durability and profitability of its daughters. If the sire has been genotyped for the 50K SNP panel, a GLPI is provided instead of an LPI.

ESTIMATED BREEDING VALUE - Production proofs are expressed as Estimated Breeding Values (EBVs), which are measured in Mature Equivalent Kilograms, for Milk, Fat and Protein Yield. The single EBV published for Milk, Fat and Protein Yield is the average of the first three lactations. EBVs are also provided for Fat and Protein Percentages.

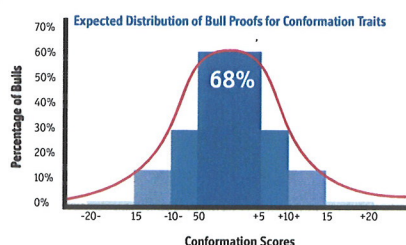
CANADIAN TEST DAY MODEL - The Canadian Dairy Network (CDN) is responsible for calculating production proofs for sires and cows using the Canadian Test Day Model (CTDM), which compares the progeny of each sire to their contemporaries using data from each test day. A unique feature of the CTDM is that separate EBVs are available for Milk, Fat and Protein yield, as well as Persistency and Somatic Cell Score, for each of the first three lactations.

ROLLING PRODUCTION BASE - Production and conformation EBVs are calculated relative to a rolling base which is updated in January each year. In 2014, the rolling base includes all cows born during a 3-year period (2006-2008) having test day records in the CTDM evaluation. Active sires tend to have higher production EBVs, since their proofs are expressed relative to this cow base. Conversely, the EBVs of older sires tend to decline as the rolling base is adjusted.

STANDARD DEVIATIONS - Simply put, the standard deviation tells us how far a bull is from the mean (average) value of all the bulls. The graph on the right shows the normal distribution of bull proofs for conformation traits with 68% of bull ranging from -5 to +5, 95% from -10 to +10, 99% from -15 to +15, etc.).

For most bulls their scores will be close to the average of all the bulls, while fewer bulls will score at the high end or at the low end. Very few bulls reach scores as high as +19 as compared with over 99% of bulls falling in the range of +15 to -15.

For more information on Canadian Proving System visit the Canadian Dairy Network at <http://www.cdn.ca>



A PRODUCTION -

Based on the Canadian Test Day Model using Estimated Breeding Values from 1st, 2nd & 3rd lactation for Milk, Fat and Protein yield which are blended together to achieve one published rating. A Rolling Genetic Base is used to express Production EBVs. In 2014, this base includes all cows born during a 3-year period centred 7 years ago (2006-2008) having test day records in the CTDM genetic evaluation analysis.

B CONFORMATION -

Conformation proofs are expressed as Estimated Breeding Values (EBVs) displayed using a -20 to +20 scale, with a standard deviation of 5. A rolling Genetic Base is used to express Conformation EBVs. In 2014, this base includes all proven bulls born in the most recent 10-year period (1999-2008). A sire's conformation proof is based on all classifications of his first lactation daughters using a linear type classification system. Daughter scores provide the basis for EBVs for major type and descriptive traits. Major traits can be used to narrow down the field of sires (e.g. feet and legs.) Descriptive traits can be used to focus on specific traits (e.g. correct foot angle).

C DESCRIPTIVE TRAITS -

Descriptive traits are evaluated using the same method as the Conformation but focuses on specifics with the greater number being preferable except for the Mid-Scoring traits that are circled. For the Mid-Scoring traits the higher the number the greater the tendency to exhibit the trait as noted by the letter (e.g. 9S - very high tendency to transmit Straight for Rear Leg Side View). A value of 0 is considered the most correct.

D HEALTH & REPRODUCTION TRAITS -

A collection of genetic evaluations to be used as herd management tools. By avoiding sires significantly below breed average for these traits, breeders can augment the effectiveness of their overall breeding program.