

Animal Care Indicator - Somatic Cell Count Baseline Establishment

October 2017

The Baseline for the global dairy sector is to be set at the 2016 mean Somatic Cell Count figure of **288,000** cells per milliliter. This figure globally, appreciating the regional variations has a mean range of 181,000 –702,000 cells per milliliter. This figure includes data from both dairy cows and buffalo.

The figures are based on a calculation using data from DSF members in six dairy production regions around the world. Establishing a benchmark and subsequently the baseline figure for Somatic Cell Count as the high level indicator for the Animal Care, using this data, required aggregating reported means by year (using data from 2014 – 16) and by region, evaluating the variability within the data sets and assessing the confidence limits for the data.

Developing robust benchmarks is a process of extrapolating sub-sets of observations to estimate the representativeness of the data to the whole population within the region. The data were assumed to be representative of lognormal distributions, using means from each region for each year. A standard deviation approach across all reported data for all years was used within each region to characterize the distributions. The resulting means and 95 percent upper confidence limit (UCL) were calculated based upon the lognormal distribution.

The 95 percent UCL represents the number where there is 95% confidence that all other data will be equal or less than that value.

Therefore, subsequent year's calculations will use this approach calculating the arithmetic mean and a 95 percent UCL. To enable the DSF to manage the outcomes of this process and to appreciate and explain variations, a regional breakdown is to be reported as in the table below.

Region	Indicator 1000 cells / ml	
	Mean	95% UCL
Africa	702	1461
Asia	325	627
Europe	193	290
North America	202	254
Pacific	181	204
South America	375	828
Global	288	625