

A Guide to **SION's** Catalogue Terms & Figures



Production Traits

- Milk** = Predicted transmitting ability for milk, shown in Kg. Positive Kg is preferential.
- Fat** = Predicted transmitting ability for fat, shown in Kg and percent. Positive Kg and percentages are preferential.
- Protein** = Predicted transmitting ability for protein, shown in Kg and percent. Positive Kg and percentages are preferential.
- Rel** = Reliability. Percent reliability for a sire's proof, influenced by the number of daughters\herds\lactations.
- Production Summary 1st Lactation** = The actual average of bulls' daughters according to milk Kg, fat and protein percentage, adjusted for 305 days.

Functional Traits

- SCC** = Somatic Cell Count. The log count of somatic cells per milliliter. Please see values in the following table. Negative values are preferential.

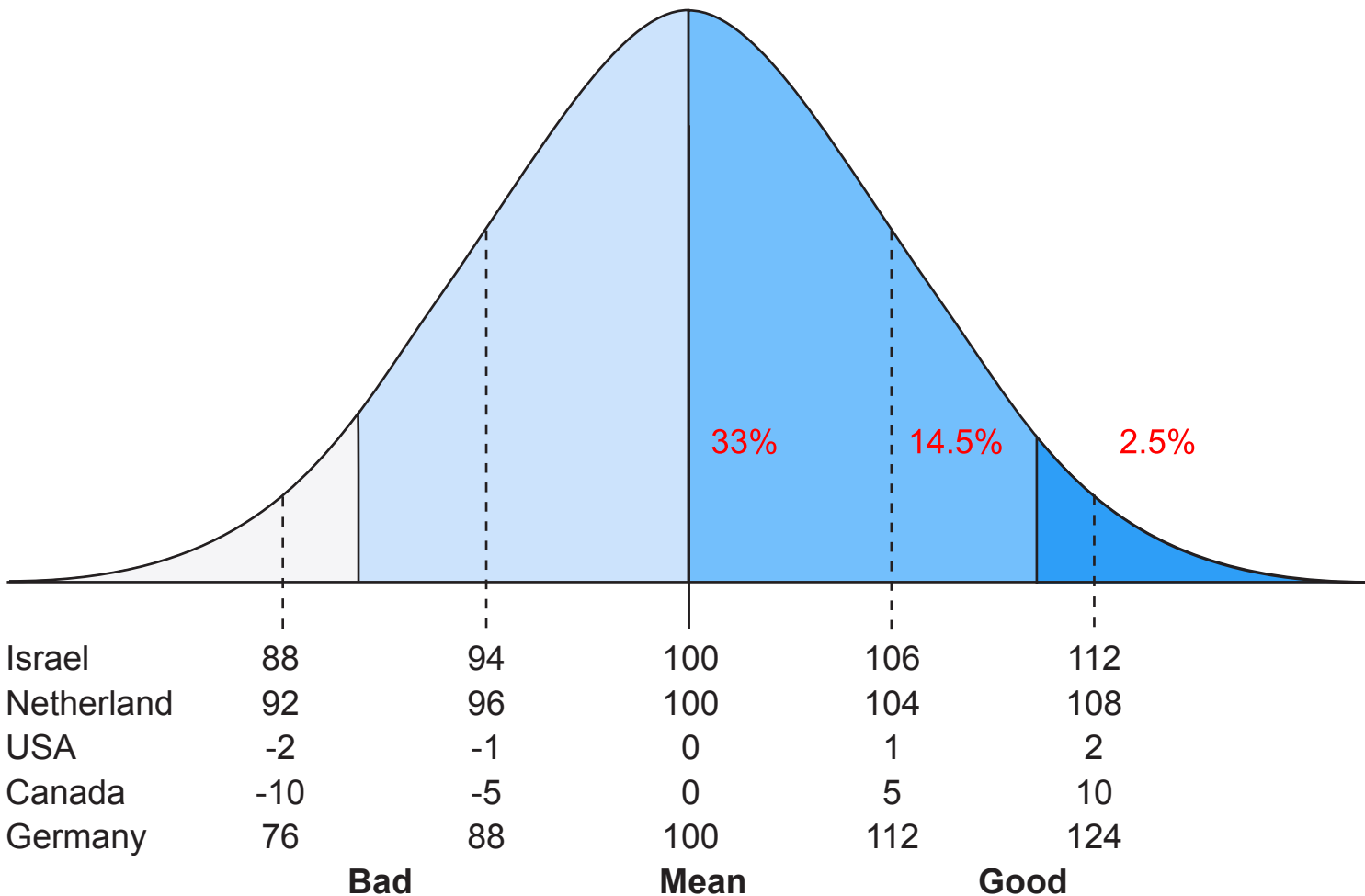
Somatic Cell Count/ml	Log
25,000	1
50,000	2
100,000	3
200,000	4
400,000	5
800,000	6

- Daughter Fertility** = Inverse of the number of inseminations to conception, multiplied by 100(%), for example: 2 inseminations per conceiving = 50%. Each increase of 1% in daughter fertility equals a decrease of 4 days open. Positive percentages are preferential.
- Persistency** = Predicted milk production 180 days after peak production divided by peak production (in %). Positive percentages are preferential.
- Longevity** = Productive life. Measured as the total number of additional or fewer productive days (from first calving till culling) that you can expect from the bull's daughters over their lifetime. More credit is given for older cows than for younger animals. Positive days are preferential.
- Bull Stillbirth** = Calf mortality. The percentage of the bull's calves that are born dead to first lactation animals, during 24 hours from calving. Negative percentages are preferential.
- Bull Calving Difficulty** = The percentage of births of bull's calves that are considered difficult in first lactation animals. Negative percentages are preferential.

Conformation Traits

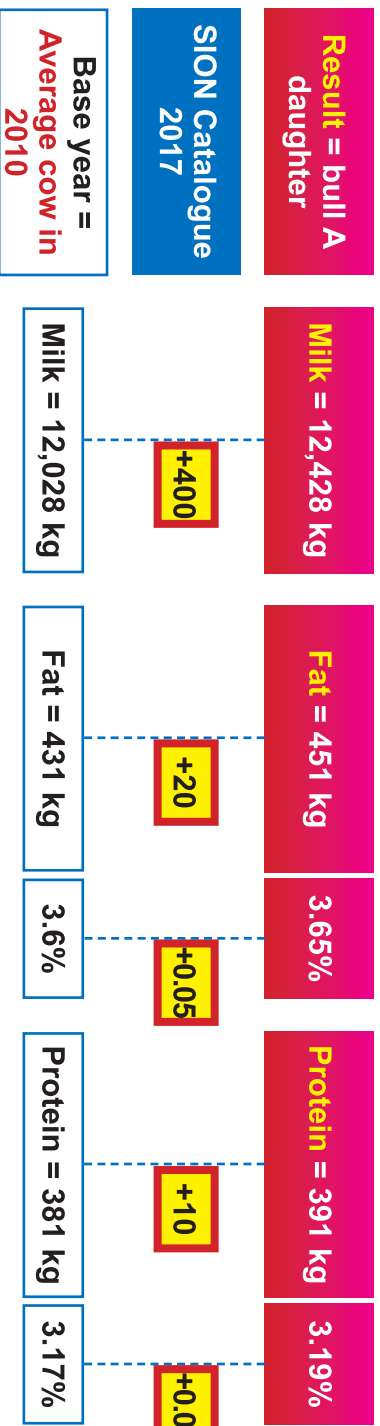
- Body Size** = Predicted transmitting ability for body size and shape. In this trait, small size is preferential.
- Dairy Character** = Physical evidence of milking ability. Major consideration is given to general openness and angularity while maintaining strength. Positive values above 100 are preferential.
- Udder** = Predicted transmitting ability for udder size and shape. Positive values above 100 are preferential.
- Legs** = Predicted transmitting ability for feet & legs size and shape. Positive values above 100 are preferential.
- Total Score** = Summarize of the predicted transmitting ability for type. Positive values above 100 are preferential.

Standard Deviations in Different Countries

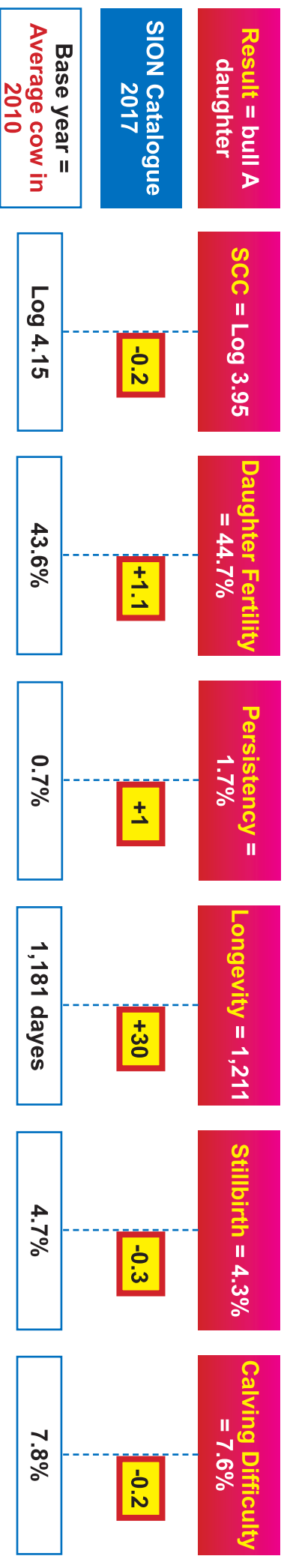




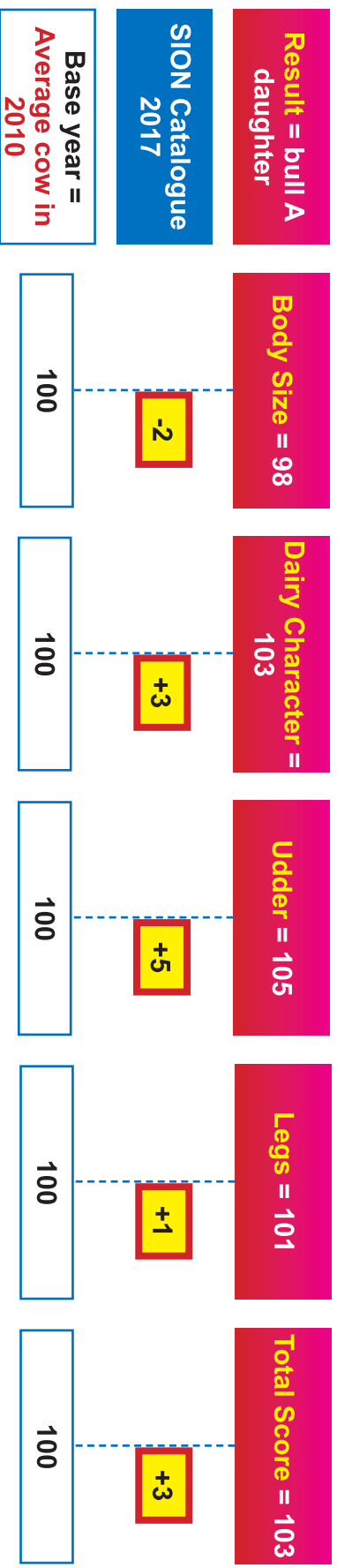
SION Production



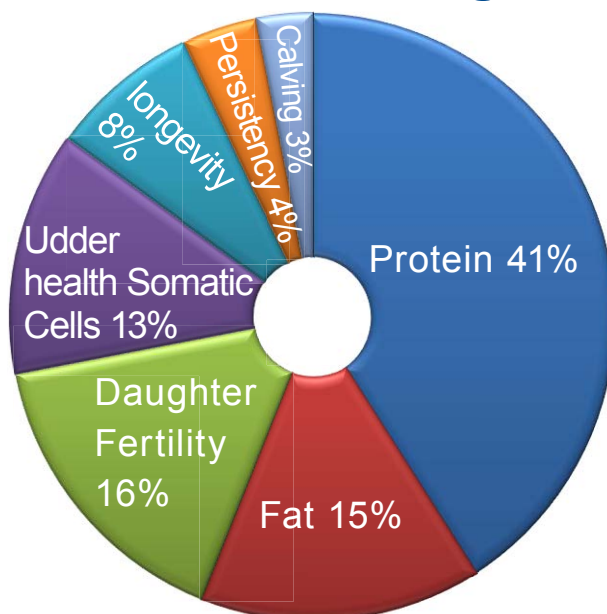
SION Functional Traits



SION Conformation



SION Israeli Breeding Index - PD11



- The Israeli Index is combined of 56% production traits.
- The protein to fat ratio is 2.5:1
- Through the years the production traits got the highest weight in the Israeli Index. As a result of this, the Israeli cow is the highest producing cow in the world, both in milk and in solids.
- Daughter fertility is in high proportion since 2001
- Persistency is a unique trait and contributes to the overall milk quantity of the cow

ICAR Results Production in Different Countries

Country	Year	Milk (kg)	Protein (kg)	Protein (%)	Fat (kg)	Fat (%)	F + P (kg)
Israel	2015	11,772	388	3.30	437	3.71	825
USA	2015	11,321	349	3.08	417	3.68	765
Sweden	2015	10,133	345	3.4	414	4.09	759
Denmark	2013	9,661	327	3.38	395	4.09	722
Canada	2014	10,102	322	3.19	391	3.87	713
Netherland	2007	8,720	303	3.48	378	4.34	682
Japan	2012	9,356	310	3.31	371	3.97	681
Spain	2015	9,873	315	3.19	354	3.59	669
Germany	2013	8,975	303	3.38	360	4.01	663
Hungary	2014	9,240	304	3.29	343	3.71	647
UK	2015	8,646	285	3.3	343	3.97	629
China	2015	8,320	271	3.26	323	3.88	594
Ireland	2015	8,160	264	3.24	329	4.03	593
France	2015	7,996	254	3.18	312	3.9	566
Australia	2011	7,087	232	3.27	279	3.93	510
New Zealand	2014	6,011	216	3.59	257	4.27	472