# Overview of phenotypic values - Jersey

The table contains current phenotypic breed averages and values per one breeding value unit (+1 EBV-unit) for single traits included in sub-indices in NTM. Phenotypic values are when applicable weighted across lactations 1-3 with weight factors 0.30, 0.25 and 0.45. Values are available for NAV countries together and for separate countries, but for many traits the values are very similar.

Below are the formulas for calculating a bull's effect and expected daughter performance when the EBV for the single trait (for example sole ulcer) is available. In the case of genomic bulls, the single trait EBV is not always available and then the formulas for calculating the effect is somewhat different (here the EBV for the sub-index is used, for example claw health, and its deviation/2 has to be multiplied with a regression between sub-index and single trait EBV).

**How to calculate a bull's effect:**
EBV deviation from mean / 2 * value for 1 EBV unit (from the table – in the example we use a value of -0,003)
  • Example: Bull with EBV for sole ulcer 110: (110 – 100) / 2 * -0,003 = -0,015
**How to calculate expected performance of bulls average daughter:**
Bulls effect + breed average (from the table – in the example we use a value of 0,06 )
  • Example: Bull with EBV for sole ulcer 110: -0,015 + 0,06 = 0,045
**How to calculate expected performance from certain mating:**
(Bull's deviation from mean / 2 * value for 1 EBV unit) + (dam's deviation from mean / 2 * value for 1 EBV unit) + breed average
  • Example: Bull with EBV for sole ulcer 110 and dam with EBV for sole ulcer 105: -0,015 + (105-100) / 2 * -0,003 + 0,06 = 0,0375

| Trait | NAV Countries | |
| --- | --- | --- |
|  | Average | Value / +1 EBV unit |
| **Yield** | | |
| Milk (305-d, kg) | 7713 | 57.3 |
| Fat (305-d, kg) | 459 | 2.1 |
| Protein (305-d, kg) | 333 | 1.7 |
| Breeding values not in NTM | | |
|   Fat-% (average in 305-d) | 6.0 | 0.05 |
|   Protein-% (average in 305-d) | 4.3 | 0.02 |
| **Growth** | | |
| Daily carcass gain | | |
|   Short fattening period (g/day) | 425 | 2.2 |
| Carcass conformation score (1-15) | 3.4 | 0.02 |
| **Fertility** | | |
| Interval from calving to first insemination (cows) (days) | 81 | -0.4 |
| Interval from first to last insemination (heifers) (days) | 24 | -0.3 |
| Interval from first to last insemination (cows) (days) | 35 | -0.6 |
| Number of inseminations (heifers) | 1.6 | -0.01 |
| Number of inseminations (cows) | 1.8 | -0.01 |
| **Birth** | | |
| Survival (sire) (%) | | |
|   1st lactation | 95.2 | 0.05 |
|   2nd and later lactations | 97.6 | 0.01 |
| Calving ease (sire) (%) | | |
|   1st lactation | 95.5 | 0.04 |
|   2nd and later lactations | 97.3 | 0.02 |
| **Calving** | | |
| Survival (maternal) (%) | | |
|   1st lactation | 95.2 | 0.05 |
|   2nd and later lactations | 97.6 | 0.01 |
| Calving ease (maternal) (%) | | |
|   1st lactation | 95.6 | 0.05 |
|   2nd and later lactations | 97.3 | 0.02 |
| **Udder health (%)** | 9.9 | -0.51 |
| **General health** | | |
| Early reproductive disorders (%) | 2.6 | -0.06 |
| Late reproductive disorders (%) | 3.4 | -0.03 |
| Ketosis (%) | 1.4 | -0.04 |
| Other metabolic diseases (%) | 13.5 | -0.28 |
| Feet and leg problems (%) | 9.1 | -0.34 |
| **Claw health** | | |
|   Sole ulcer (p) | 0.09 | -0.002 |

| | | |
|---|---|---|
| Sole hemorrhage (p) | 0.16 | -0.002 |
| Heel horn erosion (p) | 0.06 | -0.002 |
| Digital dermatitis + interdigital Dermatitis (p) | 0.11 | -0.004 |
| Verrucose dermatitis + Interdigital Hyperplasia (p) | 0.01 | 0.000 |
| Double sole + white line separation (p) | 0.06 | 0.000 |
| Cork screw claw (p) | 0.09 | 0.000 |
| Frame | | |
| Stature (cm) | 131.1 | 0.15 |
| Body depth (1-9) | 6.5 | 0.03 |
| Chest width (1-9) | 5.4 | 0.02 |
| Rib structure (1-9) | 5.3 | 0.03 |
| Top line (1-9) | 6.0 | 0.03 |
| Rump width (1-9) | 5.3 | 0.04 |
| Rump angle (1-9) | 5.0 | 0.05 |
| Feet & legs | | |
| Rear legs, side view (1-9) | 5.4 | 0.02 |
| Rear legs, rear view (1-9) | 5.9 | 0.02 |
| Hock quality (1-9) | 5.6 | 0.02 |
| Bone quality (1-9) | 6.5 | 0.02 |
| Foot angle (1-9) | 4.4 | 0.02 |
| Udder | | |
| Fore udder attachment (1-9) | 5.0 | 0.05 |
| Rear udder height (1-9) | 5.6 | 0.04 |
| Rear udder width (1-9) | 5.6 | 0.04 |
| Udder cleft (1-9) | 4.8 | 0.04 |
| Udder depth (1-9) | 4.0 | 0.05 |
| Udder balance (1-9) | 4.6 | 0.03 |
| Teat length (1-9) | 5.6 | 0.06 |
| Teat thickness (1-9) | 5.6 | 0.06 |
| Teat placement (front) (1-9) | 4.9 | 0.05 |
| Teat placement (back) (1-9) | 5.5 | 0.05 |
| Milkability (g fat+protein/min) | 195 | 2.7 |
| Temperament (1-5 or 1-9) | 5.5 | 0.03 |
| Longevity (days in production) | 932 | 11.4 |
| Youngstock survival | | |
| Early period (heifers) (%) | 94.6 | 0.26 |
| Late period (heifers) (%) | 92.7 | 0.17 |
| Early period (bulls) (%) | 90.7 | 0.28 |
| Late period (bulls) (%) | 91.1 | 0.19 |