

Trait	Distribution	Definition	Indicator	Explanation
AMF (kg min <sup>-1</sup> )	Normal	Average milk flow	Stress, temperament	Under stress conditions more cortisol is excreted hampering oxytocin release, leading to reduced milk flow
DUR (min)	Normal	Milking time during a visit in the AMS	Stress, temperament	Milk let down from stressed cows is slower, leading to increased DUR
VIS3	Binary	If more than three visits a day, then score 1; otherwise 0	Temperament; food motivation?	Cows with desirable temperament visit the AMS more often
VIS4	Binary	If more than four visits a day, then score 1; otherwise 0	Temperament; curiosity	Cows with desirable temperament visit the AMS more often
KO	Binary	If the milking device is knocked off at least one quarter, then score 1; otherwise 0	General discomfort, temperament	More nervous cows, more kicking; bad temperament, more knock offs
INT (h)	Normal	Interval between two consecutive milkings	Social dominance, temperament	Shorter intervals imply more milkings (higher dominance), indicating free choices to access the robot and also the feeding and resting area
EC (mS cm <sup>-1</sup> )	Normal	Electrical conductivity	Health	Pathological changes of udder tissue produce a change in the electrical conductivity