#CALFMATTERS

Calf Health and Welfare Blueprint

MANAGEMENT

Nutrition management
Feed in = investment in future
Feed as if you would feed a baby (hygienically)
Colostrum intake – 3-4 litres or 10% of BW within 2 hours of birth
Second similarly sized amount within 12 hours
(See Colostrum quality)
Milk replacer = >13% birthweight in milk replacer (at 125g/litre) (> 25% CP) + cold weather allowance
Concentrate calf starter from 3 days of age and >2kg at weaning
Concentrate + forage to maximise rumen development

Environment management
Reduce disease challenge = Stocking density + bedding + hygiene
Housing by age group
Use both natural + artificial airflow
Avoid changes at high risk periods

Calf weight	Approximate age	Minimum (statutory) area	Recommended area
45 kg	0 months	1.5m²/calf	2m²/calf
46 kg to 99 kg	0 to 2 months	1.5m²/calf	3m²/calf
100 kg to 149 kg	3 to 5 months	1.5m²/calf	4m²/calf
150 kg to 199 kg	5 to 7 months	2m²/calf	5m²/calf
200 kg to 199 kg	More than 7 months	2m²/calf	6m²/calf

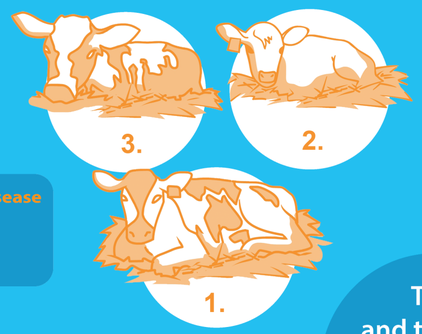
*AHDB Dairy (2016)

Health management
Disease information recorded
Treat at correct time as per protocol
Vaccination as standard
Calf health scoring daily
Protocols in place and used

Temperature	50kg calf, <3 weeks	50kg calf, >3 weeks	75kg calf
	*Additional milk replacer (L)		
20 °C	0	0	0
10 °C	0.9	0	0
0 °C	1.8	0.9	1.4
- 20 °C	2.7	1.8	2.7

Source: Teagasc

Sourcing management
Calves sourced from known supplier
Optimise genetics for calf health and welfare
Optimise dam feeding for delivery of fit calf



Higher nesting score associated with reduced disease
1 – Legs entirely visible when lying down
2 – Legs partially visible when lying down
3 – Legs generally not visible when lying down

Environmental scoring
Nesting
Building temperature
Hygiene [Dry and clean knees]
NH4 detectors: Ammonia <20 ppm (CIGR)
Humidity – <75-80%[5]
Airflow – <0.5m/s

PREVENTION

Maximise defences/resilience
Maximise colostral protection (see Colostral quality)
Maximise nutrition (see Nutrition management)
Water hygiene +/- non-antibiotic water treatments
Probiotics
Calves delivered unaided / free from disease
Appropriate vaccination of calves as standard
Non-vaccination only where metrics show it's not needed
Long term genetic selection for resistance
Pre-condition suckled calves
Vaccinate cows for scour pathogens

Vet is key part of the prevention package
Designated quarterly calf health review
Review calf health and welfare checklist to identify weaknesses

Reduce challenge/stressors
Hygiene of feeding/water equipment and food/water itself
Hygiene of bedding – Clean and well drained
Environment – Clean to touch, drainage in place, disinfect between batches
Air – Ventilation (natural + artificial) minus drafts at calf level
Guide for calf housing (AHDB)
House in age groups from same farms and appropriately stocked
Minimise stressful events together

Tips and tricks to help calf rearing go from good to great

MONITORING

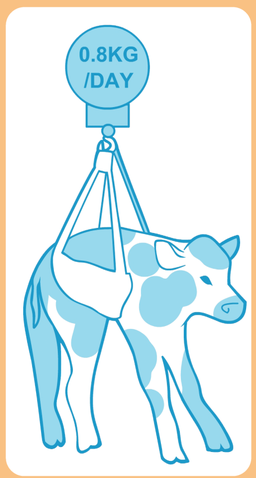
Related cow metrics
Weight at first calving
Stillbirth rates
Untagged calf mortality
Age at first calving = 24

Colostrum quality
Hygiene: ATP tests/coliform counts
Quality: Brix = >22 %[2,3]
Transfer: Serum IgG >20 g/l TP >10 g/dl[4]

Vaccine monitoring
Temperature loggers from practice to farm fridge
Doses used = enough to protect all animals?

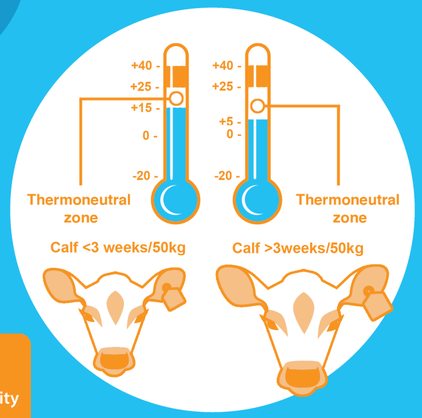
Calf metrics:
Wisconsin calf scoring chart
Calfornia calf scoring chart
Calf temperature recording = <39.5˚C
Weights
- Note arrival/birth weight
- Weigh tapes vs crush
- DLWG = >0.8 kg / day [1]
Teagasc heifer growth calculator
US scanning of lungs
Morbidity (all treatments)
Mortalities per day on holding
Post mortem SOPs
- Full vs targeted
- Perform PMs during video call with your vet

Medicines used (always available, as is mortality)



Supply chain metrics
Request abattoir results
Request or supply disease prevalence/susceptibility markers in purchased calves
Request or supply info from origin farm on antimicrobial/vaccine sales (vet to provide)

Treatment metrics
Medicines sales (threshold alert)
Health scoring/treatment follow ups
No. of treatments vs DLWG
Screening for disease
(temperature recording – on calf / regular checking)

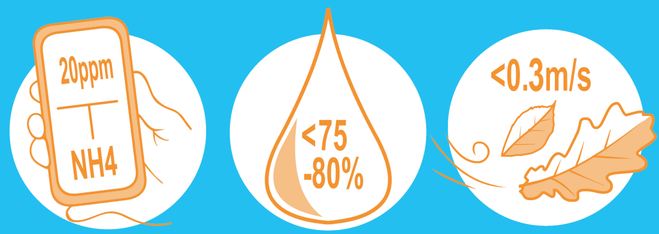


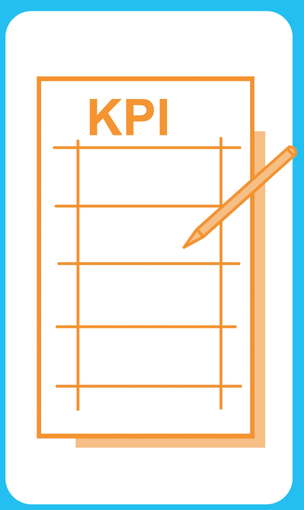
TEAM WORK

Staff management (the team is key)
Training
Enough to do the job
Collaboration
Set roles
Stockmanship scoring
Protocols for all (consistency) - Set and review (+ve reinforcement)
Separate enterprise to main herd
Measure appropriately: Medians and range
What's the goal?

Pick your metrics
5 max
Review and change 1 quarterly

Goals
Consistent benchmarking within farm and amongst farming groups to enable realistic goals and incentive. Alters perception of the norm.
= Separate calf rearing cost of production
= Lifetime monitoring/EID





CURRENT COST OF PRODUCTION	GOAL
/heifer or kg	/heifer or kg

References. 1. Sherwin VE et al. (2016) In Practice 38: 113-122 2. Bielmann V et al. (2010) J Dairy Sci 93: 3713-3721 3. Vandeputte S et al. (2014) Vet Record 175: 353-354) 4. Deelen et al. (2014) J Dairy Sci 97: 3838-3844 5. Esmay & Dixon (1986) AVI Westport 166-167: 256