

24 Hours to Weaning



Milk

Whole milk vs Calf Milk Replacer (CMR)

| Whole Milk | CMR |
|--|---|
| Advantages <ul style="list-style-type: none"> 100% dairy protein Rich in fat (high in energy) Contains IgGs and other antibacterials | Advantages <ul style="list-style-type: none"> Consistent Stored easily Tailored to calves nutritional requirements Accelerated growth? |
| Disadvantages <ul style="list-style-type: none"> Disease transmission risk (especially Johnes) Contains pathogens Antibiotic trace (AMR) | Disadvantages <ul style="list-style-type: none"> Cost Labour to mix Less digestible (depends on CMR) |

Aim for 8l at 12.5-15% inclusion rate (>1kg CMR/calf/day)

Every 100g of DLWG in the first two months of life is associated with a 85–225 kg increase in milk yield during first lactation

Hyde et al. (2021) and Alex Bach

Feed

Concentrate pellet – protein %, other raw materials

Fresh clean water must be offered – solid feed consumption is reduced by 40% when milk is the only liquid provided

Forage – chopped straw provided

Milk only



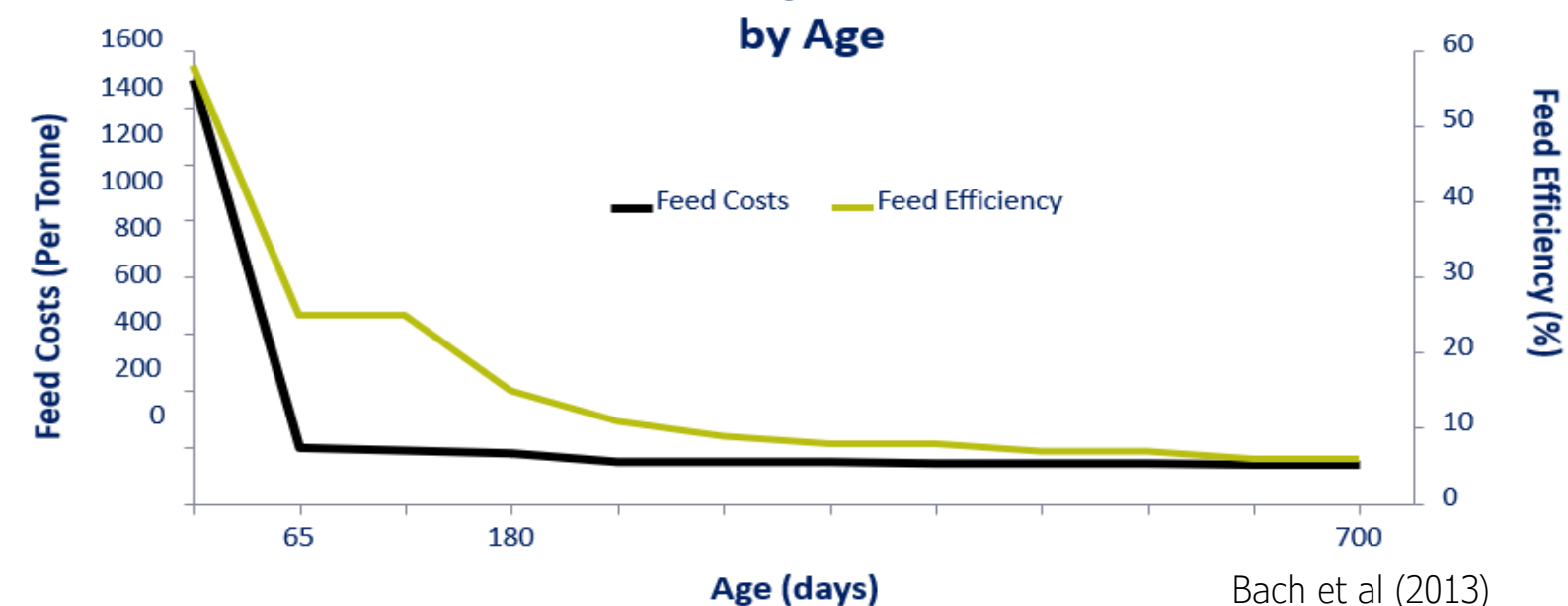
Milk and grain



Milk and hay



Feed Efficiency and Feed Costs by Age

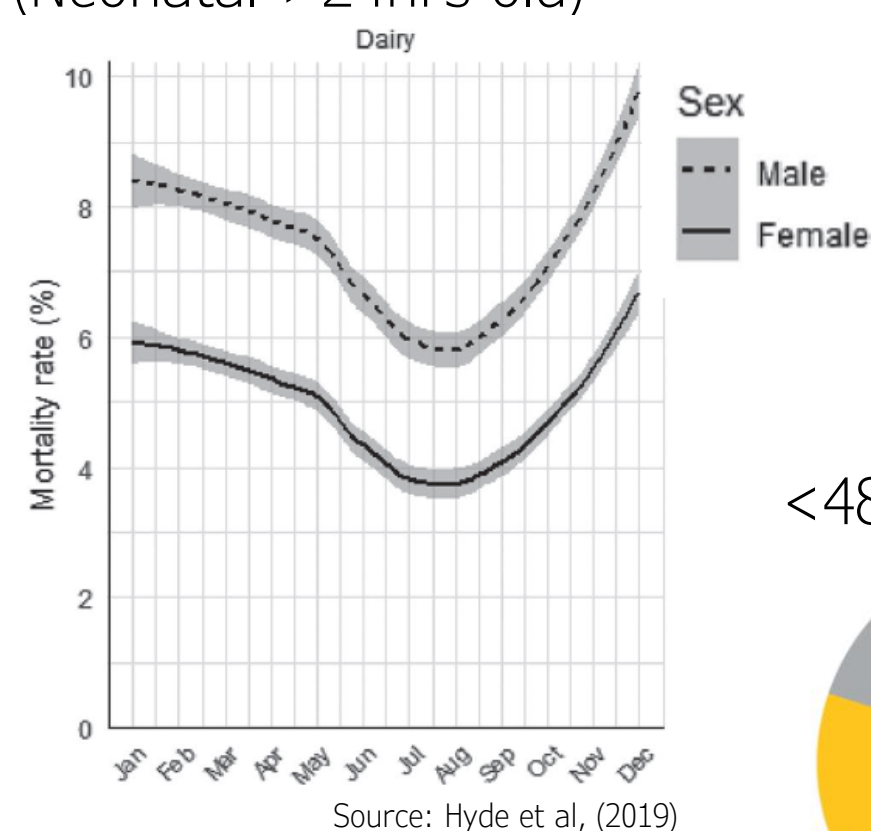


Bach et al (2013)

Health

25% of on farm deaths happen within the first 3 months

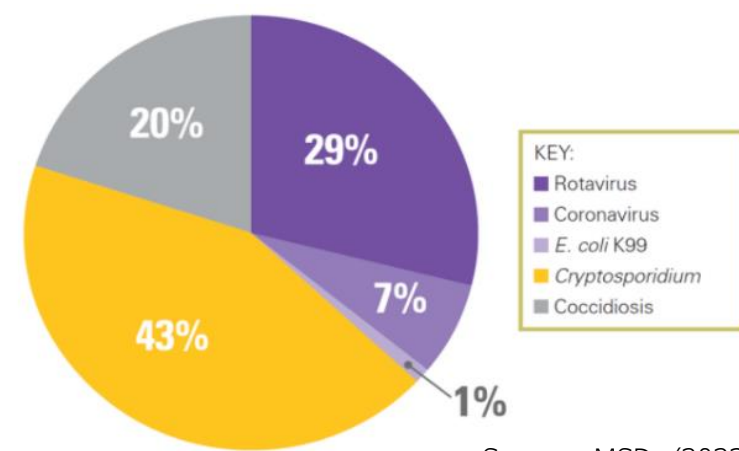
6% mortality rate in dairy <3mo with seasonal influence (Neonatal >24hrs old)



Source: Hyde et al, (2019)

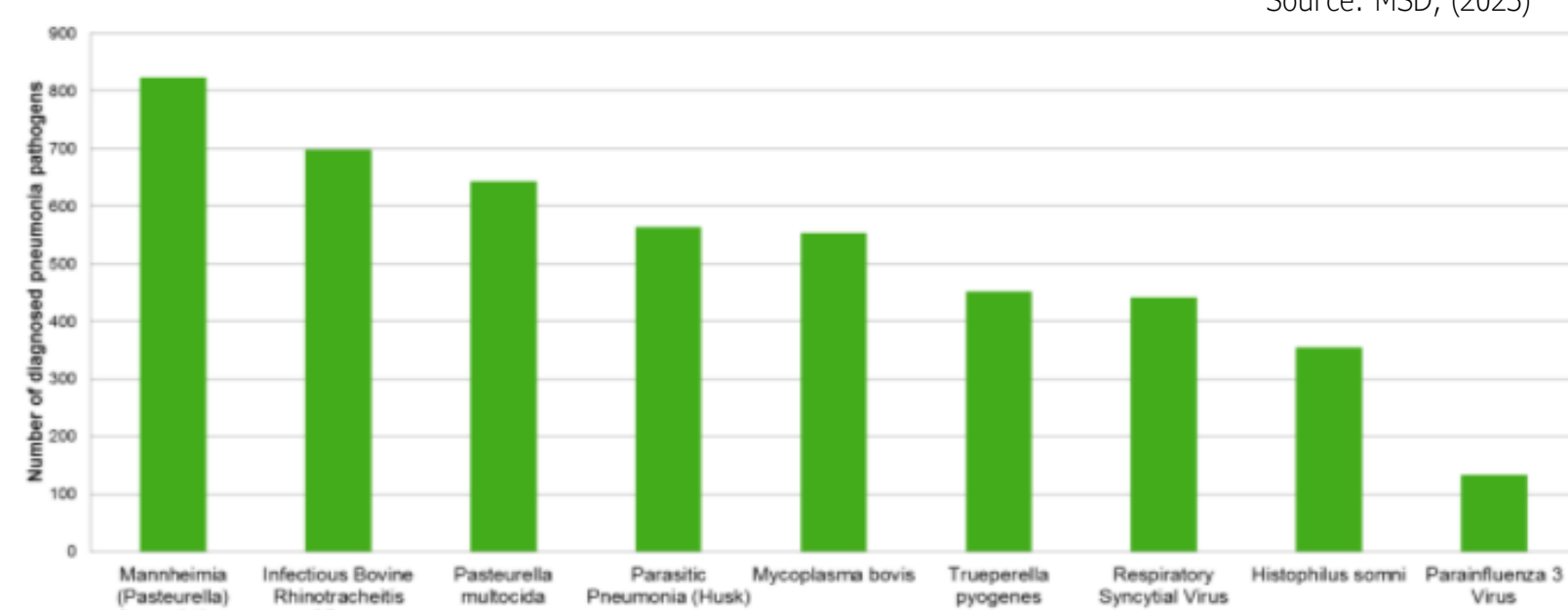
Estimated around 8% of calves die before 24h of age (including stillborn)

<48% of calves will scour



Source: MSD, (2023)

<46% will get BRD



Environment

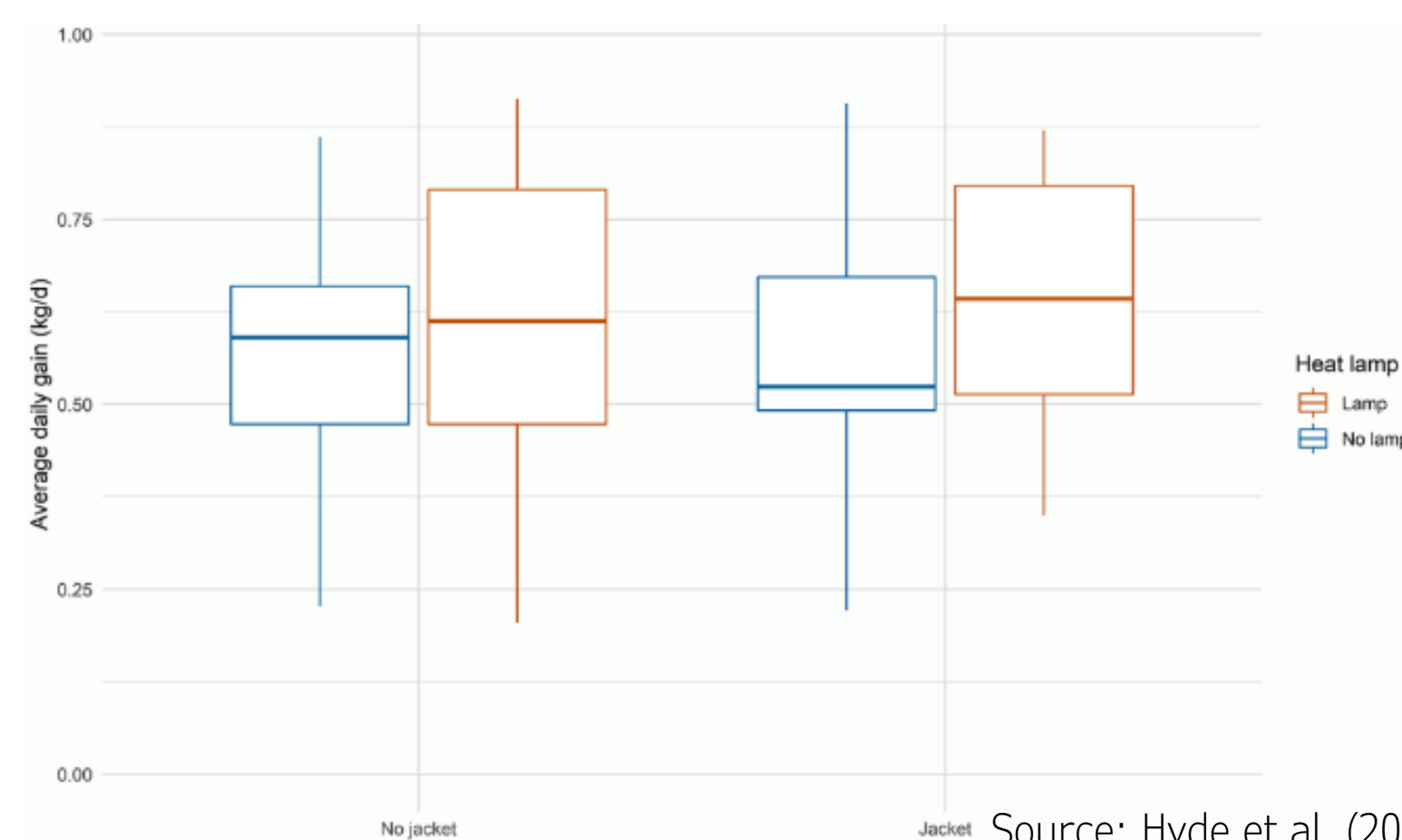
- Dry with excess moisture continually removed
- Draught free (Ideal air speed around 0.25m/sec)
- Clean and cleanable

Ventilation

- Remove excess heat and water vapor
- Remove microorganisms, dust and gases
- Provide uniform distribution of air

Cold Stress

Average daily gain increase of 30g is associated with a 1°C increase in calf building temperature



Source: Hyde et al, (2021)