

Positive animal welfare: happy calves, thriving farms

By promoting the positive animal welfare practices already in place on farms, we can build trust with consumers, ensure better lives for calves, and support the hard work of farmers. **Sarah Bolt**, Technical KE Manager, Kingshay reports

Animal welfare is ever evolving, driven by a deeper understanding of animal behaviour and increasing societal expectations. Historically, welfare focused on preventing harm, as outlined in the Five Freedoms (1965), which emphasised 'freedom from' - hunger and thirst, discomfort, pain, injury or disease, fear and distress. The Animal Welfare Act (2006) later reframed this into a needs-based approach, recognising the importance of suitable environments and diets, expression of normal behaviour, social interactions, and protection from pain, suffering, injury and disease. More recently, the focus has shifted towards positive animal welfare, ensuring not just the absence of negative experiences but the presence of positive ones, including the emotional needs of the animal.

Despite its growing importance, positive animal welfare lacked a unified scientific definition until January 2025, when the Royal Society published a consensus definition - see box 1.

Whilst this definition is progressive and aspirational, it is important that we consistently strive for improvement in animal welfare and continue to push the standards higher in the dairy industry, for the benefit of all (see box 2). Indeed, the UK Dairy Cattle Welfare Strategy 2023-2028, also prioritises positive welfare, emphasising environments that promote natural behaviours such as curiosity and play.

BOX 1. POSITIVE ANIMAL WELFARE DEFINITION

'Positive animal welfare is defined as the animal flourishing through the experience of predominantly positive mental states and the development of competence and resilience. Positive animal welfare goes beyond ensuring good physical health and the prevention and alleviation of suffering. Positive mental states result from rewarding experiences, including having choices and opportunities to actively pursue goals and achieve desired outcomes, according to species-specific and individual capabilities. Genetic, developmental and experiential factors (e.g. pre-natal, early life, environmental) contribute to individual differences in the ability to achieve positive animal welfare. Positive animal welfare can be assessed using animal-based indicators and can be evaluated over different timescales, thereby contributing to the lifetime picture'. (Rault J-L et al. 2025 A consensus on the definition of positive animal welfare. Biol. Lett. 21: 2024.0382. <https://doi.org/10.1098/rsbl.2024.0382>).



Teat fed, pair reared calves with both inside & outside access.

“Research suggests colostrum absorption rates are higher when fed via a teat rather than a tube, aligning with natural behaviour.”

Raising a healthy calf up to puberty is essential for optimal farm performance. It is therefore necessary to promote positive animal welfare during this period of their lives. This article explores current best practices for youngstock management that align with positive welfare principles and opportunities for further improvement.

Pre-Weaning Feeding Practices

Feeding directly impacts welfare. Poor nutrition can lead to hunger, frustration, and suboptimal growth. Good colostrum management (quality,

BOX 2. ANIMAL WELFARE BENEFITS FOR FARMERS

- Healthier animals
- Productive animals
- Motivated staff
- Increased sustainability
- Stronger consumer trust

quantity, quickness, and cleanliness) is critical for calf health. Research suggests colostrum absorption rates are higher when fed via a teat rather than a tube, aligning with natural behaviour.

Traditional feeding of 2 litres twice daily often results in hunger and poor welfare. While the industry debates the optimal milk quantity, quality and concentration, a balance between milk and solid feed is necessary for good rumen development. Teat feeding reduces non-nutritive sucking and frustration compared to bucket feeding, and increased feeding frequency may further minimise hunger. Automatic feeders allow greater flexibility, but there is no consensus on the ideal number of meals per day.

Water access has historically been debated, with concerns that early water provision could reduce milk intake. However, water is essential for rumen



Provision of enrichment encourages play behaviour.

development, and deprivation leads to dehydration, illness, and poor growth. Forage provision (hay or straw) remains controversial, with arguments about its effect on starter intake. However, from a welfare perspective, it promotes rumination and natural foraging behaviour. Offering forage via nets can serve as enrichment, reducing non-nutritive behaviours.

Regardless of the feeding strategy, hygiene is critical - unclean equipment increases the risk of disease and poor welfare outcomes.

Pre-Weaning Social Management

Since calves are typically separated from the dam early, human-animal interaction plays a crucial role in welfare. Positive interactions reduce fear and stress, whereas poor handling increases avoidance behaviour. Stockmanship skills, could form part of wellness assessments.

The ideal timing and method for dam separation requires further research. Future studies should explore strategies such as calf-at-foot systems, anti-sucking devices, and gradual separation methods to improve welfare outcomes.

Historically, dairy calves were raised in individual pens for easier management, but social isolation is now recognised as stressful. Studies show that calves will work hard to gain social contact, even preferring full interaction over limited contact through pen walls. Socialisation from as early as two days old enhances welfare and development.

Group rearing, when managed properly, does not negatively impact health or production. Instead, early social interaction may have long-term benefits for welfare and productivity (see box 3). However, group housing requires sufficient feeding space and enrichment to prevent competition and reduce cross-sucking.

Pre-Weaning Environment

A clean, dry, well-bedded environment is fundamental for calf welfare. The EFSA recommended space allowance for calves is 3m² per animal, double the UK minimum of 1.5m² for calves under 150kg. While 20m² allows full expression of play behaviour, practical constraints often limit

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Positive human-animal interactions are crucial, as early fear can persist into adulthood

this. Still, allowing calves to have more control over their own environment may also benefit them and elicit a positive response. For example, enrichment is gaining popularity, with hanging balls, brushes, or tyres promoting play behaviour. Beyond toys, allowing calves choice, such as access to both indoor and outdoor areas, enhances welfare. Designated retreat spaces can help calves avoid aggressive interactions, further improving their well-being.

Observing calf behaviour provides insight into welfare conditions. Increased vocalisation, non-nutritive sucking, and cross-sucking indicate hunger or frustration, while higher play activity signals positive welfare.

Weaning Management

Weaning is a high-stress period for both calves and stockpersons. Strategies to reduce anxiety and frustration are key. Weaning by age is convenient but weaning based on solid feed intake supports better rumen development and welfare.

The method of milk withdrawal affects stress levels. Gradual weaning (reducing milk volume or concentration) is less stressful than abrupt weaning. However, reducing milk volume may cause frustration, making dilution weaning a preferred method. One study found that offering warm water on the final day of weaning was less stressful than complete liquid feed removal.

“Thoughtful observation of calf behaviour provides valuable feedback, guiding welfare improvements on-farm.”

Vocalisation frequency is a strong indicator of weaning distress. Monitoring calf vocalisations can help refine management strategies for a smoother transition.

Conclusion

Adopting positive animal welfare principles in youngstock management benefits both calves and farmers. By focusing on nutrition, socialisation, enrichment, and gradual weaning, we can enhance well-being, improve growth rates, and support long-term productivity. Thoughtful observation of calf behaviour provides valuable feedback, guiding welfare improvements on-farm.

Ultimately, happy, healthy calves contribute to thriving, sustainable dairy farms.



Pair or group housing encourages natural social behaviour, while automatic feeders support positive welfare by enabling smaller, more frequent meals.

BOX 3. BENEFITS OF SOCIAL CONTACT

- Increases in feed intakes in grouped calves has been attributed to a concept called social facilitation. This is a social phenomenon in which being in the presence of others improves an individual's task performance.
- The concept of social support is “the ability of social partners to modulate or down-regulate the impact of stressors on the recipient's homeostasis” as defined by Rault (2012).
- Social support is considered responsible for individually reared calves vocalising more at weaning than group reared calves.
- Play behaviour, a positive indicator of welfare, increases with pen size, and occurs more often when calves are grouped.
- Individually reared calves have a lower social status in the herd, whilst group housing allows for better development of social skills. These calves are more confident and show less fear response to humans. As this continues throughout their lifetime, group reared calves are likely to be easier to handle, less stressful for both humans and stock.