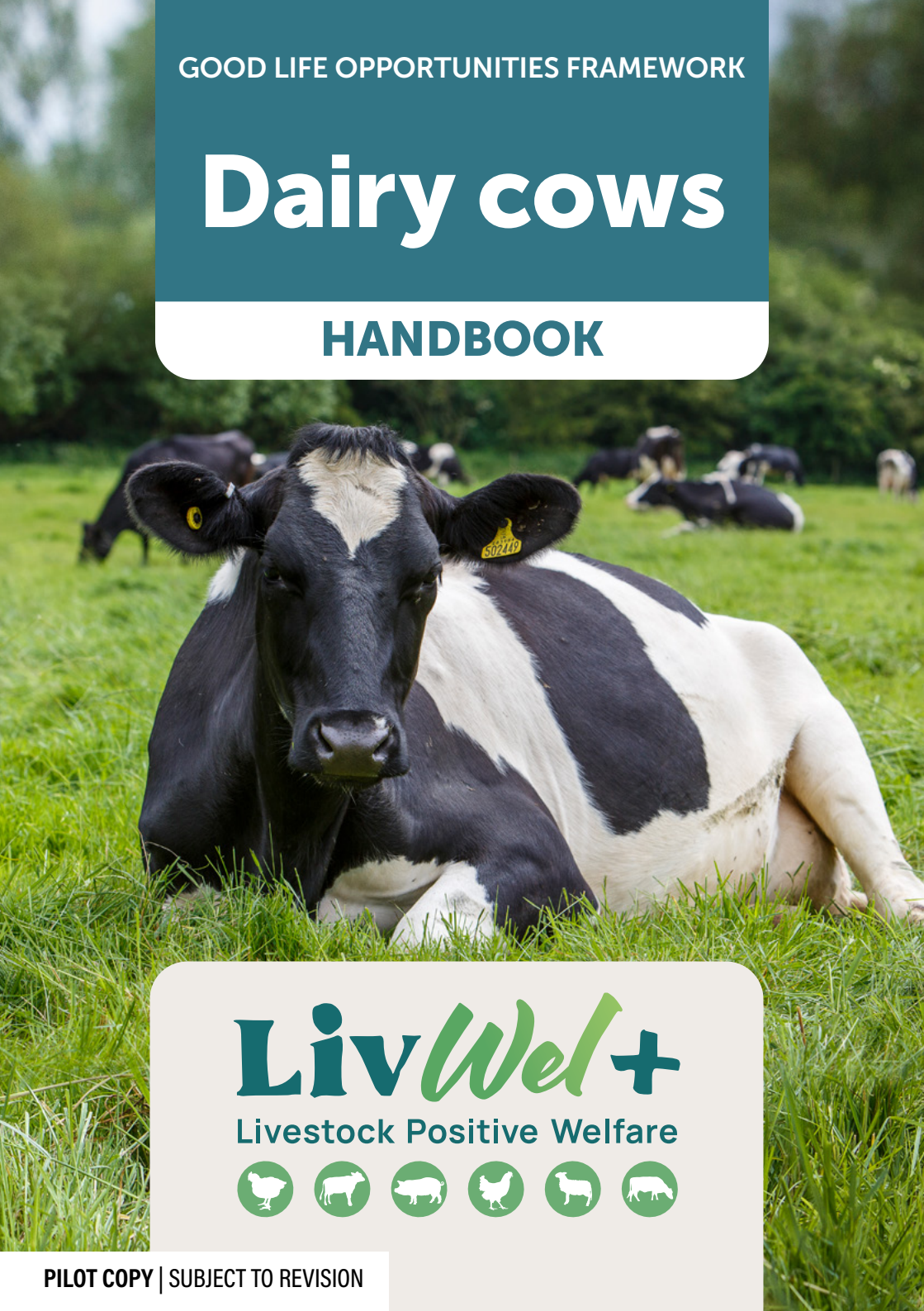


GOOD LIFE OPPORTUNITIES FRAMEWORK

Dairy cows

HANDBOOK



LivWel+

Livestock Positive Welfare





Positive welfare leads to a good life

Good farm animal welfare is about more than preventing harm to animals – it's about creating the conditions for every animal to enjoy life. Animals value **positive experiences** such as feeling comfort, pleasure, interest, confidence, and good health. Allowing animals to make their own individual choices is also valuable. These help them to be relaxed, content, and able to cope well, which also supports growth and productivity. Enjoyable experiences are known as "**positive welfare**".

To date, the main focus for farm animal welfare has been on preventing suffering. This approach is captured in the "Five Freedoms" for animal welfare, which aims to make sure animals are free from hunger and thirst, discomfort, pain, injury, disease, fear, distress, and from being stopped from behaving naturally. These harmful experiences are described as "**negative welfare**" which continue to be monitored and minimised.

For welfare to be truly good, positive experiences need to greatly outweigh any negative ones.

Defra's Animal Welfare Committee (formerly the Farm Animal Welfare Council) explains this through the idea of a "good life." They rank animal welfare on a scale:

- **Life not worth living** – mostly negative experiences.
- **Life worth living** – a mix of positive and negative experiences.
- **Good life** – mostly positive experiences.

If animals are given resources (e.g. space, companions or enrichment) they value and that allow them to feel comfort, pleasure, interest, confidence, and good health, they have the chance to experience positive welfare and live a "good life."

Good Life Opportunity Framework - Positive welfare tiers

Using advice from experts and research from scientific studies, scientists have created a framework that shows what farm animals need to feel comfort, pleasure, interest, confidence, and good health – and therefore live a good life.

The framework has three levels, ranging from **Welfare +**, giving animals some positive experiences that are better than the legal minimum standards, to **Welfare +++**, giving animals the best possible chance for a good life, with many opportunities for positive experiences

Moving up the tiers, animals have:



- More favoured resources (from the animal's point of view)
- A greater amount of resources
- More choice in resources
- Monitoring of behaviour and use of resources, so changes can be made to give them even more positive experiences



Defining opportunities for a good life for livestock

There are five categories of opportunities for positive experiences in farm animals:

Comfort

- Comfort focuses on the animals' ability to choose an environment that is physically and thermally comfortable.

Pleasure

- Beyond meeting their basic needs, cattle gain pleasure from food – especially when they have a choice in what they eat and can carry out natural activities like foraging and grazing.
- Calves find pleasure from food when provided opportunities for suckling, and ensuring they are full when milk fed.
- Young cattle enjoy performing pleasurable behaviours like play.
- Cattle experience pleasure from nurturing experiences, including the close bond between mother and calf and allowing and supporting a gradual weaning process.

Confidence

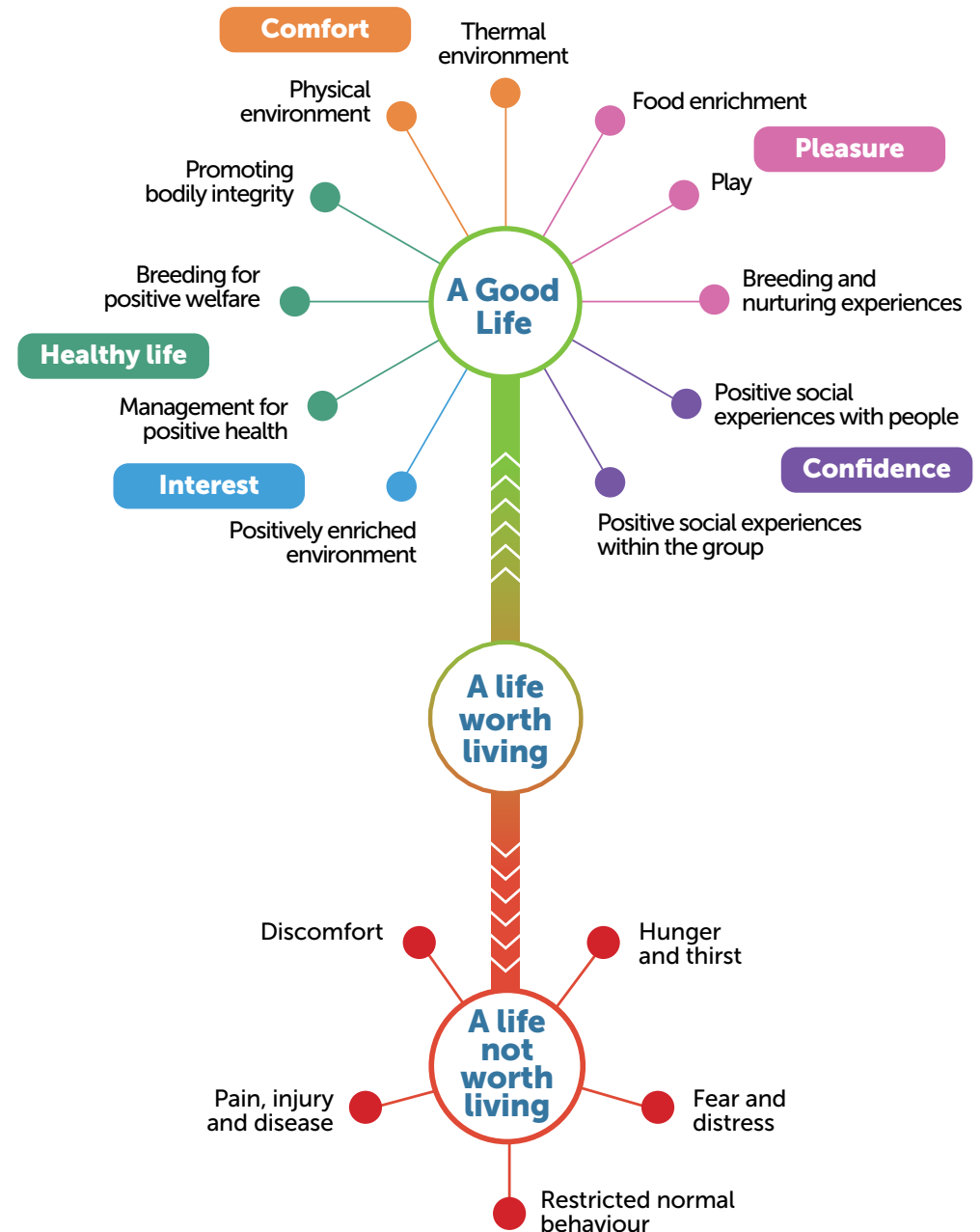
- When cattle are handled and managed in ways that help them feel safe, they can build trust with and enjoy the company of people.
- Cattle are herd animals and form strong bonds with other cattle.

Interest

- Cattle are inquisitive animals. They benefit from chances to explore, learn, show natural behaviours and make choices in a varied and interesting environment throughout their lives.

Healthy life

- A healthy life is needed for a good life with day-to-day health managed effectively.
- Long term health and welfare is positively influenced by breeding choices.
- By not removing body parts of cattle, they are able to perform behaviours that are core to their basic nature.



Comfort:

Physical environment

POSITIVE FRAMEWORK TIERS



- No cattle are tethered
- Indoors, dry and comfortable lying area consisting of solid floor and bedding
- Bedding is comfortable (compressible) and kept dry and clean
- In cubicles:
 - bedding is evenly spread.
 - cubicles are the correct size and design for the herd
 - cubicles allow cows to stretch their feet to the side.
- at least 5% more usable cubicles are provided than the number of cows
- Loose housing is provided for a period of at least 2 weeks before and after calving
- Suitable level and period of darkness for undisturbed, nighttime rest
- Access to pasture for at least part of the year (e.g. grazing season)
- At pasture, cattle can all use a sheltered, dry lying area at the same time



- All areas in the housing have solid floors
- Bedding is deep as well as clean and dry
- Loose housing is provided:
 - Cattle have free access to a deep, bedded, unrestricted lying area
- Cattle can lie in any orientation and position
- Cattle can switch sides easily
- Access to pasture for most of the year i.e. at least 183 days



- Deformable (e.g. mats)/non-slip flooring in standing areas
- Choice of bedding types in different lying areas and/or different bedding types have been trialled recently
- Enough space to choose where and with whom to rest (i.e. more than enough space for all to rest together)
- Access to pasture all year round
- Cows choose their own milking intervals via robotic milking
- Cattle are observed and management is adjusted to optimise comfort and rest

SCIENTIFIC REASONING



Cows spend up to 14 h/day lying; their comfort is shown by ease of lying down/ rising, resting in preferred positions, and resting together^{1,2}.

The provision of too few or poorly designed cubicles causes conflict and injuries, while deep, dry bedding increases lying time, relaxation, and reduces lameness^{3,4}.

Loose housing and straw yards allow freedom of posture, ability to switch sides easily, more choice in who they lie near and how far apart they are, and greater comfort than cubicles^{5,6}.

Cows prefer to rest at pasture, where they show longer resting times and more relaxed behaviours⁷⁻⁹.

Increased lying behaviour optimises rumination and increases blood flow through the udder, improving digestion, udder function and milk production¹⁰.

Physical comfort is about being able to choose a comfortable lying position, rest undisturbed, all being able to lie down together when they choose, and the quality of lying surfaces on offer.

1. Munksgaard et al., 2005
2. Mattiello et al., 2024
3. EFSA, 2023
4. Tucker & Weary, 2004
5. Phillips & Schofield, 1994
6. Val-Laillet et al., 2009
7. Arnott et al., 2017
8. Battini et al., 2019
9. Armbricht et al., 2019
10. Stokes et al., 2022

Comfort: Thermal environment

POSITIVE FRAMEWORK TIERS



- Housing maintained at a comfortable temperature
- Housed cattle have some choice of temperature in the housing
- Access to an outdoor area for at least part of the year
- Access to some shade or shelter when outside



- Access to pasture for most of the year i.e. at least 183 days
- Access to a range of shelter types and shade intensities (e.g. trees, hedges, walls, portable shelters)



- Enough space indoors for all cattle to choose to move nearer to or further from open, ventilated areas, at the same time
- Access to pasture all year round, unless extreme weather prevents this
- Outdoors, enough shelter/shade that all cattle can use at the same time
- Cattle are observed and management is adjusted to optimise thermal comfort

SCIENTIFIC REASONING

Cold stress occurs below ambient dry air temperatures of -5°C (calves), -14°C (dry cows), and -25°C (lactating cows), although wet and/or windy weather increases the rate of heat loss and will cause cold stress above these air temperatures. Heat stress starts at air temperatures above 25°C ^{1,2}.

Cows need space and choice to seek shade, shelter and warmer or cooler areas for thermoregulation^{3,4}. Increasing the variety and quantity of such areas enables cows to choose preferred areas and supports them spending more time in comfortable areas.

Access to yards or pasture improves signs of comfort such as increased resting and relaxed body postures, with cows preferring pasture, especially at night^{5,6}.



When dairy cattle are heat stressed, milk quality⁹ and yield declines as well as reproductive performance, whilst lameness increases¹⁰.

Cows need shelter and shade to reduce heat/cold stress; allowing all cows to access shade and shelter together increases time spent in favourable thermal conditions and increases positive welfare through improved comfort and synchronised behaviour^{7,8}.



Thermal comfort is about providing a comfortable temperature as well as choice of temperatures, so all animals can adapt as they prefer.

1. Shepard & Maloney, 2023
2. Herbut et al., 2018
3. Herbut et al., 2021
4. Schutz et al., 2009
5. Arnott et al., 2017
6. Russell et al., 2023
7. Tucker et al., 2007
8. Kok et al., 2023
9. Bertocchi et al., 2014
10. Polsky and von Keyserlingk, 2017

Pleasure: Food enrichment (Calves)

POSITIVE FRAMEWORK TIERS



- Calves fed milk until at least 8 weeks old
If not fed by the dam:
 - calves are fed using teats rather than buckets/troughs to allow natural suckling behaviour
 - young calves are fed a milk allowance of $\geq 20\%$ of their body weight daily to ensure satiety



- Calves fed milk until at least 12 weeks old
- If not fed by the dam:
 - Calves are fed milk ad lib
 - Warm milk is fed to calves (38–40°C)
- Weaning from milk is carried out via gradual reduction in milk volume
- Calves are offered solid food, including long fibre roughage, from a few days of age to reduce weaning stress (can include grass)



- Calves are fed by a cow (mother or nanny cow) until natural weaning (at least 6 months)

SCIENTIFIC REASONING

Feeling full (satiety) is associated with positive feelings of pleasure. Feeding young calves a milk allowance of at least 20% of their body weight ensures satiety. It is even better to provide free access (ad lib) to milk to allow the calf to control their own milk intake (both the number of feeds and the volume per feed) ^{1-2, 6}.

Providing warm milk at 38–40°C mimics natural nursing and increases feeding enjoyment⁵.



If not reared by the dam, then milk feeding via a teat fulfils the calf's strong suckling motivation, providing pleasure beyond nutrition. The urge to suck continues for 20-30 minutes after milk ingestion and so at least one teat per calf should be left, which reduces cross suckling behaviour^{3,4,6}.



Gradually reducing milk volume over time at weaning to increase solid food intake helps to reduce nutritional stress. Fibre such as chopped roughage (long cut, >4cm, is preferred) is a vital component – chewing and ruminating are important to calves and help with gut development⁶.

Calf rearing systems where calves are naturally reared by their dam are considered the highest ethical standard⁶.

1. Khan et al., 2007
2. Jasper & Weary, 2002
3. Welk et al., 2023
4. Napolitano et al., 2009
5. Webb et al., 2014
6. EFSA 2023

**Finding pleasure
from food for calves
is about providing
opportunities for
suckling, ensuring
calves are full when
milk fed and providing
access to fibre to
transition off milk**

Pleasure: Food enrichment (Cattle from weaning)

POSITIVE FRAMEWORK TIERS



- Enough space for all cattle to feed together at the same time
- At least some food delivered in a way that encourages grazing behaviour e.g. access to grass, or long fibre roughage (hay/straw) when indoors



- Housed cattle are offered variety in food (more than one feed/ forage type)
- Outdoors, cattle are offered a choice of pasture vegetation e.g. herbal/multi species sward (including grasses, herbs and legumes)



- Housed cattle are offered variety in food (more than two feed/ forage types)
- Access to browse hedges/trees in the pasture
- Feed preferences are observed and monitored and more preferred foods or new foods trialled

SCIENTIFIC REASONING

Cows gain enjoyment from food through taste, smell, texture, chewing, and foraging. Providing a variety of foraging, grazing and browsing opportunities are linked to natural pain relieving chemical (opioid) release, feelings of reward, and the pleasant state of feeling full¹⁻³.



Access to hedges and/or trees allows for choice and natural browsing behaviour, adds variety, is a source of vitamins and minerals and enables self-medication with medicinal plants, increasing comfort and resilience¹⁰⁻¹². Cattle will readily browse 12 - 55% of their diet¹³.

Providing more food types allows for choice and control in selecting what to eat: ruminants express feeding preferences if they are allowed to select their own diet⁶ which improves health, reduces stress, and is associated with positive feelings⁵. Cows show preferences for diverse diets, legumes, and species-rich pastures⁵⁻⁹.

Providing roughage when all cows have space to eat at once improves the opportunities to feel full (satiety), increases relaxation, and synchrony of behaviour – a positive welfare indicator⁴.

1. Mellor, 2015
2. Mellor, 2017
3. Spruijt et al., 2001
4. Mattiello et al., 2024
5. Manteca et al., 2008
6. Rutter, 2008
7. Rutter, 2010
8. Webb et al., 2014
9. Seehuus, 2013
10. Villalba et al., 2007
11. Villalba et al., 2010
12. Ramírez-Restrepo et al., 2018
13. Whistance, 2018

Finding pleasure from food is about providing variety and opportunities to naturally graze and browse.

Pleasure: Play

POSITIVE FRAMEWORK TIERS



- Calves are kept with at least one other calf to enable social play behaviour
- Calves have at least 3m² each to allow space for active and social play (for at least an hour a day)
- Housing has a suitable layout and non-slip floor for safe play
- When indoors, at least one type of enrichment item to encourage play is available at all times



- Calves are kept with two or more other calves to provide more opportunity for social play
- Enough space most of the time for most animals to engage in active/social play (>10m²/calf for calves 2wks-6mths in groups up to 7 animals, less space needed for other circumstances)
- When indoors, calves have at least two types of play enrichment, available at all times e.g. replenishing straw, hanging balls, ropes, cardboard boxes



- Calves older than 2 weeks have access to at least 20m² each (for at least 1hr/day) to allow space to fully perform active and social play behaviour
- When indoors, calves have more than two types of play enrichment, available at all times
- Resources to encourage play are replenished/changed regularly to maintain novelty
- Cattle are observed and management is adjusted to increase play behaviour

SCIENTIFIC REASONING

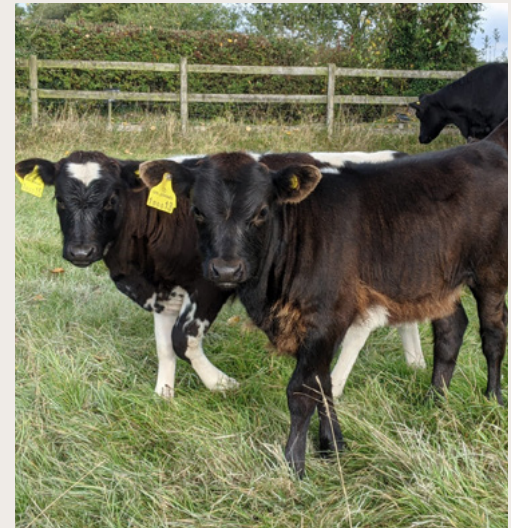
Pleasure from play is promoted by providing plenty of space, companions and interesting objects.



Play behaviour is enjoyable and rewarding for young calves^{1,2}.

When given more space per animal, calves show increased levels of active play (jumping, kicking and galloping) and social play (non-aggressive pushing and butting of heads, playful mounting). At least 3 m² has been shown to allow some play, but a provision of ~20 m² allows for full expression⁵.

Providing pens with non-slip flooring, straw, and novel enrichment (e.g. hanging balls) encourages play^{6,7}.



Keeping calves in pairs or groups encourages more play behaviour and can help calves better cope with weaning^{3,4}

1. Wood-Gush & Vestergaard, 1991
2. Budzynska & Weary, 2008
3. Reinhardt, 1980
4. De Paula Vieira et al., 2010
5. EFSA, 2023
6. Sutherland et al., 2013
7. Jensen et al., 2015

Pleasure: Nurturing (Calving and the cow-calf bond)

POSITIVE FRAMEWORK TIERS



- Cows have enough space/ separate calving pens (with clean, dry bedding) to move away from the main group and remain undisturbed when calving
- Cows and calves are kept together for 24 hours before separation



- Calves are kept with, and able to feed from their own mother (or a foster cow), for at least 8 weeks



- Cows can move at least 25 metres from the main herd when calving
- Cows are provided with artificial and/or natural, sheltered, secluded spaces (e.g. hides, hedges) for calving
- Calves are kept with, and able to feed from their own mother until natural weaning

SCIENTIFIC REASONING



Cows have a strong instinct for maternal behaviour which results in positive mental, behavioural, and health benefits to both cow and calf. Maternal care includes licking, nursing (satisfying the calf's urge to suck) and play behaviour².

**Enabling pleasure
from nurturing
focuses on the cow's
opportunity to
raise her calves and
experience the
cow-calf bond.**

Allowing calves to stay with their mother for 24 hours before separation means they can benefit from some maternal care but without severe separation stress from breaking a more fully formed bond².

Using a foster dam/nanny cow to rear calves can give many of the same benefits as staying with its mother, but must be managed correctly².



A cow's natural behaviour is to find a quiet, undisturbed place to calve and form a bond with her calf away from the herd¹.

Through keeping cow and calf together, the calf experiences social and cognitive learning benefits³, increased play³ and better weight gain⁴, and both calf and cow experience an increase in hormones associated with pleasure⁵. The cow is able to satisfy her strong maternal motivation, which is associated with pleasurable feelings⁶.

The benefits of access to the dam for the calf increase with prolonged contact. Delaying separation until at least ~8 weeks, as well as using gradual weaning measures, reduces distress due to the natural weakening of the cow-calf bond at this age. Natural weaning is considered the highest ethical standard for calf rearing².

1. Flörcke and Grandin, 2014
2. EFSA 2023
3. Wagner et al, 2012
4. Flower and Weary, 2001
5. Lupoli et al, 2001
6. Jensen et al, 2024

Pleasure: Nurturing (Weaning)

POSITIVE FRAMEWORK TIERS



- Calves are kept in stable pairs or familiar groups after separation to reduce stress
- Calves separated from dams are fed from a teat, not a bucket or trough
- If not naturally weaned, interventions protect against stress of milk and social weaning (e.g. solid food offered, no other stressor undertaken at the same time)



- If not naturally weaned, artificial weaning is gradual (≥ 1 week) using methods such as fence-line contact or anti-suckling devices
- Some interventions are used to reduce the stress of weaning for the cows (e.g. access to a bull)
- Some cows are left with calves at weaning to help reduce the stress for calves



- Cattle are observed and management is adjusted to optimise low stress weaning

**Pleasure from
nurturing focuses on a
gradual and low stress
weaning process.**

SCIENTIFIC REASONING



Weaning is stressful due to separation of the cow-calf bond, withdrawal of milk and, often, a change in environment. Stress can be reduced by allowing some level of cow-calf contact whilst milk access is stopped, for example using fenceline weaning or noseflaps¹.

Offering varied roughage and gradually reducing milk supports a smoother transition for nutritional weaning from milk. Roughage encourages rumen development, feed exploration, and enables dietary choice which is important at all ages⁴.

Weaning stress can be further reduced by gradual weaning rather than abrupt separation¹ and pair/group housing helps calves cope better^{2,3}.

When separated from the dam shortly after birth, although the calf may show little or no separation stress, it loses the positive benefits that cow-calf contact can bring. Separation stress is strongest after the bond is fully formed at 4 days. The bond naturally starts to decline after around 2 months. Natural weaning occurs gradually from ~6 months¹ onwards.

1. EFSA 2023
2. Weary et al., 2008
3. De Paula Vieira et al., 2010
4. Webb et al., 2014

Confidence:

Positive experiences with stockkeepers

POSITIVE FRAMEWORK TIERS



- Farm environment is calm and quiet
- Stockkeepers have been trained and are experienced in cattle handling
- Stockkeeper behaviour towards, and handling of, cattle is gentle, calm, confident, with no use of goads or hitting



- Cattle have the opportunity to associate people with regular neutral interactions (e.g. stock keepers walking and talking calmly amongst the cattle)
- Cattle experience positive reinforcement during routine handling (e.g. feed, scratching heads)
- Cattle have the opportunity to familiarise with stockkeepers, handling equipment and routine management
- If dogs are used, they are used sensitively i.e. cattle are allowed to move away from the dog rather than the dog chasing the cattle
- Design and layout of handling systems encourage safe, natural and low stress movement of animals (e.g. curved races, boarded sides)



- Regular training of stockkeepers on cattle welfare and handling
- Regular positive interactions with cattle at all ages (e.g. scratching, stroking, feeding)
- Cattle handled using positive reinforcement most of the time e.g. feed associated with vehicles/buckets/trough, calling/whistling, hand/body signals, dogs are not used
- Stockkeepers know the individual characters and preferences of most cows
- Cows enter the collecting yard voluntarily or in small, calm groups without force
- Cattle are monitored and action taken to increase confidence around humans

SCIENTIFIC REASONING



Calm, quiet handling reduces fear and enables low-stress handling, while negative handling increases avoidance and stress levels which can lower milk yield^{1,2}.

Training stockkeepers increases positive attitudes, results in calmer handling, and better human–animal relationships^{7,8}.

Handling using positive reinforcement further promotes confidence (e.g. stroking, quiet talking, slow movement, brushing, and food rewards) which builds trust and encourages cattle to approach humans, helping with management and handling^{3,4}.

Ensuring gentle handling of calves in the first days of life has been demonstrated to improve growth, reduce stress, and lead to lifelong confidence around humans^{5,6}.

Ensuring confidence with stock keepers means handling animals in a calm, confident way. This requires good training and suitable equipment that cattle have been able to get comfortable and familiar with.

1. Pajor et al., 2000
2. Hemsworth et al., 2000
3. Waiblinger et al., 2002
4. Munksgaard et al., 2001
5. Jago et al., 1999
6. Lürzel et al., 2016
7. Coleman & Hemsworth, 2014
8. Michaelis et al., 2022

Confidence:

Positive social experiences within the herd

POSITIVE FRAMEWORK TIERS



- Physical environment, i.e. space, resource distribution, and visual barriers, enables cattle to avoid negative interactions
- Any new cattle introduced gradually and carefully (e.g. initial fence separation)
- No cattle are kept alone



- Calves are kept and reared together in the same group (from separation from cow or arrival on farm)
- Young stock (6+ months) are reared in stable groups that remain together through rearing phases (e.g. replacement heifers move into each of the rearing phases together)
- In block calving herds, heifers calve together; for AYR herds, heifers are managed in batches so calving dates are close to each other, so that stable groups of familiar individuals are maintained
- Any mixing/regrouping is carried out gradually and carefully (e.g. at pasture, regrouping with at least two familiar animals)



- Enough space for cattle to choose who to spend time with and synchronise behaviour
- Natural social herd structure is maintained (e.g. bull present, calves with cows for social learning)
- Minimal or no mixing of cattle (e.g. cattle remain on the same farm, within the same social group, from birth through to death)
- Cattle that need to be separated have at least visual contact with other cattle
- Breeding bulls isolated only for biosecurity/disease screening, at all other times kept with or in sight of other cattle
- Cattle monitored and action is taken to reduce negative and increase positive interactions between animals

SCIENTIFIC REASONING



Mixing of unfamiliar animals leads to social instability, social stress and increased negative interactions³⁻⁶. Carrying out mixing gradually and sensitively, regrouping with at least two familiar animals increases social confidence.

Providing plenty of, and evenly distributing resources e.g. drinking troughs feeding space etc. reduces competition and aggression, enabling cattle to avoid negative interactions and increase social confidence^{1,2}.

Grooming each other and allowing cattle to form and maintain bonds from a young age reduces stress, establishes calm states and stable herd structure, and provides social buffering during times of challenge or change^{8,9}.

Keeping long-term familiar groups allows cows to maintain affiliative bonds that support social cohesion, learning, and resilience^{6,7}.

Cattle synchronise their lying, feeding, and standing. This synchronisation promotes group cohesion and positive welfare. Synchronised behaviour is better supported at pasture and generally through increased space availability^{10,11}.

Cattle are social animals. To ensure they have positive social experiences, they need space so they can be selective and synchronised, and form social bonds.

- O'Connell et al., 1989
- Battini et al., 2019
- Fielding et al., 2024;
- Sevi et al., 2001,
- Ruiz-de la Torre and Manteca, 1999a
- Ruiz-de la Torre and Manteca, 1999b
- Gutmann et al., 2015
- Duve & Jensen, 2011
- Laister et al., 2011
- Tuomisto et al., 2019
- Arnott et al., 2017

Interest: Enriched environment

POSITIVE FRAMEWORK TIERS



- Continual access to a grooming object (e.g. indoors: brush; Outdoors: scratching posts/trees branches)
- Continuous access to at least one type of enrichment (if indoors)/natural feature (if outdoors) for exploration, investigation and/or foraging behaviour
- Access to pasture during at least part of the year (e.g. during the grazing season)
- Enough space to allow for natural behaviours, i.e. grazing on clean pastures



- Continuous access to at least two types of enrichment (if indoors)/natural feature (if outdoors) for exploration, investigation and/or foraging behaviour
- Access to pasture for most of the year i.e. at least 183 days



- Continuous access to more than two types of enrichment (if indoors)/natural feature (if outdoors) for exploration, investigation and/or foraging behaviour
- New items introduced regularly to maintain interest (could include regular rotation or choice of pasture for novelty)
- Access to pasture available all year round
- Quality of the pasture environment is maintained throughout all seasons (e.g. reduce poaching, bale grazing)
- Cattle monitored and action taken to provide a more enriched environment

SCIENTIFIC REASONING



Cattle are highly motivated to access and use grooming objects, such as trees, branches, posts or artificial brushes. They are as motivated to access brushes for grooming as they are for food; using these grooming objects enables comfort and improved health through coat condition, and positive mood^{3,4}.

Cattle are naturally motivated to explore and investigate their environment. When housed, a variety of enrichment items such as brushes, provision of straw and other novel objects (e.g. boxes and hanging balls) have been shown to reduce boredom and encourage rewarding exploratory and grooming behaviours^{1,2}.

A more diverse environment where enrichments are regularly changing and novel, including both extending pasture access and rotating pastures, increases choice and control, which supports positive mental wellbeing^{8,9}.

Cattle have an overall preference to be outside, particularly at night. Pasture access enables cattle to perform a greater range of their natural foraging and exploration behaviours, and greatly increases opportunities for interest⁵⁻⁷.



Promoting interest in cattle requires a diverse and interesting outdoor environment, or if housed, providing enrichments to increase the opportunity for grazing and investigative behaviours.

1. Mandel et al., 2016
2. Russell et al., 2023
3. McConnachie et al., 2018
4. Mandel et al., 2013
5. Spruijt et al., 2001
6. Seehuus, 2013
7. Arnott et al., 2017
8. Englund & Cronin, 2023
9. Fell et al., 2014

Healthy life:

Management policy for positive health

POSITIVE FRAMEWORK TIERS



- Cattle health and welfare plan setting out health and husbandry activities, developed with appropriate veterinary advice, and reviewed at least annually
- Any variation in normal feeding, drinking, behaviour, or physical condition of cattle is given immediate attention to identify the cause
- Pain relief used as part of management of unwell/injured animals e.g. lameness/ mastitis treatment.
- Specific training given on medication use and humane culling



- Regular dialogue e.g. every 6 months with vet or other advisors/consultants to discuss welfare
- Carry out welfare outcome monitoring in addition to daily livestock inspections
- Welfare outcome monitoring data used to adjust resources and/or management to improve health and welfare accordingly
- Procedures in place to reduce the risk of disease and other negative consequences from being outdoors



- Farm staff take active part in welfare activities with wider benefits (e.g. member of peer-to-peer discussion group, scheme policy/management group, on farm welfare research)

SCIENTIFIC REASONING

Managing for positive health focuses on proactive interventions that promote health and resilience



The health of an animal is more than the absence of illness; it includes feeling well, and the ability to thrive with good physical and mental wellbeing, with resilience to disease and extremes of environment^{1,2}.

The need for daily care, to implement immediate treatment of illness, and provision of pain relief are essential for positive health⁴.

Positive welfare includes both short-term positive experiences and long-term wellbeing. Longterm wellbeing is related to resilience. A resilient cow can adapt positively and maintain health, which is a proposed indicator of positive welfare^{2,3}.

Recording and analysing herd health data with vets enables proactive management and long-term welfare planning⁴.

1. Mattiello et al., 2019
2. Colditz, 2022
3. Rault et al., 2025
4. FAWC, 2009

Healthy life: Breeding for positive welfare

POSITIVE FRAMEWORK TIERS



- Breeding choices are made that recognise the undesirable side-effects of genetic selection for production efficiency and attempt to reduce/mitigate for current health and welfare problems



- Breeding choices made for future herd health and welfare, valuing these equally to production traits such as milk yield
- If own replacements are not home-bred, feedback is given to rearers/breeders or genetics companies as to what traits are important



- Breeding choices for long-term improvement of health and welfare, resilience, longevity and metabolic normality including suitability to particular type of land/system, valuing these over production parameters

SCIENTIFIC REASONING

Farm animals have been selectively bred with a large focus on increasing production, which is often negatively correlated with welfare. Milk yield per cow has increased from ~6,000 kg in the 1960s to up to 20,000 kg today¹.



The metabolic stress associated with high productivity is linked to disease, reduced fertility, shorter lifespan, and behavioural changes^{1,2}. Breeding choices should address key health and welfare issues by carefully selecting for better traits, which can greatly improve the welfare of cattle.



In the long term, breeding should give greater emphasis on breeds and traits related to animal welfare, health, resilience, longevity and environmental efficiency including those characteristics needed to adapt and thrive in sustainable systems³.

Breeding for positive welfare means selecting the right breeds and traits to ensure a healthy life through long term positive wellbeing and resilience.

1. Oltenacu & Broom, 2010
2. FAWC, 2012
3. Brito et al., 2021

Healthy life: Promoting bodily integrity

POSITIVE FRAMEWORK TIERS



- If castration is carried out, it is only done at a young age, i.e. calves not adults, due to faster recovery times
- Some bull calves are not castrated and appropriate management strategies implemented
- No routine dehorning (removal of grown horns)
- If disbudding/castration/ freeze branding is undertaken anaesthetic and long-term pain relief is used at all ages of cattle
- Some calves are not disbudded plus appropriate resources and management of horned animals, or use of polled genetics
- No hot-iron branding is used as a method of identification



- If castration is carried out, only the surgical method is used
- Majority (>50%) of bull calves on the farm are not castrated
- If disbudding is undertaken, it is carried out with additional, appropriate level of sedation
- Majority (>50%) of calves on the farm are not disbudded



- No calves are disbudded
- No bull calves are castrated
- No branding is used for identification

By not removing body parts of cattle, cattle are able to perform activities that are core to their basic nature.

SCIENTIFIC REASONING

The procedures of disbudding, dehorning, castration, and branding all cause significant pain, with disbudding and castration linked to chronic pain and low mood^{1,2}.

Pain from disbudding and castration can be reduced by anaesthesia and a non-steroidal anti-inflammatory drug (NSAID) plus long-term pain relief to mitigate chronic pain. Whereas dehorning is distressing and painful which is not alleviated by local anaesthesia³.

Branding is painful and should be avoided, although freeze branding is less painful compared to hot iron branding⁶.

Removing horns reduces behaviours such as defence, grooming, and thermoregulation, undermining positive welfare. Appropriate resources and management for horned animals is required.^{7,8}



Rubber ring castration causes long-term pain and discomfort (increased inflammation, delayed wound healing, reduced weight gain, decreased feed intake, more frequent lesion licking and reduced lying time) compared to Burrdizzo clamp or surgical castration. Surgically castrated calves heal faster and showed fewer signs of chronic discomfort than other castration methods^{4,5}.



1. Reedman et al., 2022
2. Marquette et al., 2023
3. Neave et al., 2013
4. Reedman et al., 2022
5. Stafford & Mellor, 2011
6. Nogues et al., 2021
7. Algra et al., 2023
8. Mendl et al., 2010

LivWel+ focuses on evolving farm animal welfare assessment into capturing “positive welfare” opportunities, but this sits alongside measuring and minimising “negative welfare” which can be done through AssureWel welfare outcome assessment protocols. For more information about AssureWel visit: www.assurewel.org/dairycows

LivWel+

Livestock Positive Welfare



To find out more about the
LivWel+ project contact:
kstill@soilassociation.org

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Soil Association
Spear House, 51 Victoria Street, Bristol BS1 6AD
T 0117 314 5000
Registered charity no. 206862
www.soilassociation.org