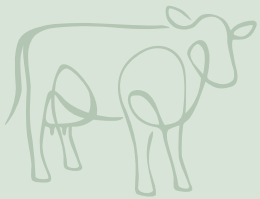


Best practice farms optimise the quality and performance of their cows by providing a clean, safe and enriched environment which supports optimal health, welfare and human-animal interactions.



Why is this important?

Cows need an environment which supports their physical and mental needs, whilst reducing the impact of potentially stressful experiences and procedures related to dairy management.



Good practice

- ✓ Cows should have the opportunity to graze outdoors, where weather conditions permit, to encourage natural behaviours. This will enhance opportunities for stimulation and exercise whilst reducing competition and frustration and improve herd synchronicity.
- ✓ To prevent both over and under eating by individual animals it is important that feeding stations are designed to allow all cows to eat roughage at the same time with minimal competition, and must ensure that individual animals have the time and opportunity to consume their daily ration without compromising their time budget (i.e. decreasing lying or resting time).

See the  **Cow Nutrition factsheet** for more information



Best practice

- ★ **Best practice** farms allow cows to have daily access to pasture, except in extreme weather. The time spent on pasture should be determined by the weather, daylight hours available and ideally individual preference by the cows, i.e. a choice based system. If pasture is part of the diet, this should also be taken into account when evaluating nutrition.

See the  **Cow Nutrition factsheet** for more information





Good practice

- ✓ Dairy cows should not be permanently housed in tie-stalls because of the continuous and severe restriction of movement and social behaviour and the risk of interference with lying down and rising up movements and prevention of comfortable resting postures.
- ✓ No new housing systems should rely on the use of tie-stalls, although it is still considered acceptable for limited time periods for events such as veterinary treatments or milking.
- ✓ Where tethering is currently unavoidable it is important that the tether is long enough to allow the cows to lie down and rise comfortably, and facilitate observation and handling. The cows should be given regular access to a loafing area or pasture to reduce the impact on restriction of movement, resting and social behaviour.
- ✓ When housed in cubicles, there should be at least 5% more cubicles or lying areas per cow, to avoid competition and encourage them to lie down and rest. Adequate quantities of bedding should be provided to ensure that lying areas are comfortable for the cows. The environment should be clean and the presence of manure kept to a minimum to prevent damage to skin, feet and udders.
- ✓ Cubicles should be designed with sufficient length, width, fittings and bedding to enable the cow to lie down and stand up with ease.
- ✓ Walkways adjacent to feeding areas should be adapted to the size and breed of cows and measure a minimum of 4.3 metres wide.
- ✓ Floors should be as clean as possible and adapted to prevent slipping during mounting behaviour or whilst lame. Injuries caused by slips or falls can affect reproductive performance as well as reducing welfare. Ground maintenance, both indoors and outside, should be ongoing to minimise the risk of lameness.
- ✓ Excessive moisture in lying areas should be avoided by ensuring suitable elevation, replenishing of bedding and adequate ventilation. If cows are to be refreshed by spraying or fogging in hot weather, this should be done away from lying areas.
- ✓ The lying area must be comfortable. When using a concrete base soft bedding must be added (i.e. 15 cm sand, 30 cm litter bedding, or soft mattress). When using mats and mattresses in cubicles a bedding with a minimum depth of 5 cm of compressed material (i.e. compressed because of the animal lying on it) should be provided. For instance, this corresponds to 3 kg of straw per day to be provided per cubicle space.
- ✓ Cows should have sufficient space to allow them to rest comfortably. Keep bedding dry, comfortable and clean. A total indoor area, including lying space, of at least 10 m²/cow should be provided.
- ✓ Cubicle dimensions should have a minimum width: 0.83 × cow height at the withers (m), resting length: 1.1 × cow diagonal length (between point of shoulder and pin bone; m), head-to-head, if space sharing: 1.8 × cow diagonal length (m), non-space sharing cubicles (i.e. cubicle against a wall): 2.0 × cow height (m).
- ✓ Other features that should be provided for cubicles are: neck rail height: 0.80–0.90 × cow diagonal length (m), brisket board height: maximum 10 cm (either round or without sharp edges), curb height 15–20 cm (with no sharp edges), partitions should not present obstacles in the head lunging space, and be flexible. Slope of the lying area between 2-5%.
- ✓ All of the walkways, collecting and exercise areas, both indoors and outside, should provide stable, moderately abrasive, non-slip, dry flooring (e.g. rubber coated floor) to reduce the risk of injury and wear and tear on the cows' feet, limbs and overall gait. Rubber matting should also be provided in areas where cows must turn sharply (e.g. entry and exit in parlour), congregate or compete for space, both indoors and outside.
- ✓ Walkways, indoors and outside, should minimise sharp turns and bottle necks which increase the risk of foot or leg injuries resulting in lameness.





Good practice

- ✓ Cow accommodation, indoors or outside, should support positive social interactions whilst giving adequate space for subordinate individuals to keep a distance from more dominant ones e.g. by providing visual barriers.
- ✓ As well as access to comfortable lying areas, the cows require lighting, noise, temperature and ventilation levels which encourage good quality resting. Advised minimum light intensity 100 lux for at least 10 hours per day and a period of darkness for at least 6 uninterrupted hours. This will improve their overall wellbeing and enable resting of their feet and legs to avoid issues with lameness.
- ✓ Loose housing systems, or outdoor environments, should consider factors such as the age, size and temperament of animals kept together to minimise stress (from aggression, competition, undernutrition). Additional space allows animals to group naturally and where this is not feasible, divisions can be used to group similar animals together, making observation and oestrus detection easier.
- ✓ Pasture should be secured with fences or other systems to avoid contact with other species of animals, or neighbouring herds of the same species.
- ✓ Tracks for pasture access should be suitable for long-distance walking (e.g. even surfaced, free from stones and debris). Careful consideration should be given to the distance cows will be expected to walk between resources to balance pasture management, opportunities for exercise and improved physical health of the cows, and the risk of foot and leg injuries depending on the ground surfaces.
- ✓ Heat stress is associated with problems such as decreased fertility and milk production. In areas where the regional climate warrants it, grazing animals should have access to shade, and cattle housed indoors should have access to cooling systems (i.e. sprinklers with forced ventilation).



Best practice

- ★ **Best practice** farms provide a well-managed bedded yard when cows need to be housed. However, when this is not possible and cubicles are used they provide 10% more cubicles than cows.
- ★ **Best practice** farms use cow cleanliness scoring at regular intervals and implement remedial strategies if problems are identified.
- ★ **Best practice** farms use environment control systems for monitoring of ambient temperature and humidity (whether manually checked or using computer sensors) to make sure the animals maintain their thermal comfort.
- ★ **Best practice** farms have efficient and ongoing maintenance protocols for indoor and outdoor ground maintenance to prevent lameness. Footbaths are used for lameness prevention as well as a treatment strategy if foot problems have been identified.
- ★ **Best practice** farms use rubber coated floor (or other deformable, non-slip standing and walking surface) at the feed manger and in alleys. Rubber matting should also be provided in areas where cows have to turn sharply (e.g. entry and exit in parlour), congregate or compete for space, both indoors and outside.
- ★ **Best practice** farms provide their cows with daily access to well-managed pasture (i.e. well-drained, provision of shelter and/or shade) except in extreme weather. This offers the opportunity to walk, run, play on varying surfaces, providing exercise, improved muscle and foot condition as well as mental wellbeing. When permanently accommodated outdoors, sufficient shelter and comfortable lying areas should be provided.





Good practice

- ✓ Hygiene and cleanliness must be kept to a high standard to help prevent infection and/or disease transmission.
- ✓ Risk factors for lameness should receive close attention on the farm including quality of the surfaces, especially at the feed face, lying comfort, track surfaces and cleanliness of the standing areas.

See the  factsheets on **Cow Metabolic and Nutritional disease, Cow Reproductive, Cow Infectious Disease, Cow Locomotion and Cow Udder Management** for more information



Best practice

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Good practice

- ✓ Observation of cows to ensure they can lie down and stand up comfortably, and without risking injury or contamination of their udder, is vital. If difficulties are identified remedial action should be taken immediately.
- ✓ In cubicle housing systems, non-slippery flooring should be used to enable postures associated with self-grooming.

See the  **Cow Behaviour and Human-Animal interactions** factsheet for more information



Best practice

- ★ **Best practice** farms provide brushes in all loose-housing systems. The number and positioning of the brushes will be dependent on herd numbers and their environment, both indoors and outside.
- ★ **Best practice** farms provide a variety of enrichments (olfactory, visual, tactile, social) to encourage a range of healthy behaviours which promote good health and welfare of the herd.
- ★ **Best practice** farms maintain and replenish enrichments to add complexity and novelty to the environment and encourage continued interactions with them by the cows.
- ★ **Best practice** farms offer cows a choice between different environment types (e.g. pasture or outdoor and indoor housing) to improve animal welfare, health and production.

Summary

Provision of a clean, safe, comfortable and enriched environment is required to engage cows in healthy behaviours, rest, rumination, exercise, exploration and play, with positive and mutually beneficial human-animal interactions, will help safeguard both their physical and mental health, improving overall resilience.



Farm

Farms that provide their cows with an environment to facilitate physical and emotional wellbeing will benefit from improved performance and profitability.



Cows

Cows provided with a safe environment are more likely to benefit from optimal health and resilience to both stress and risk of disease.



Handler

Clear farm management protocols, with associated provision of training and appropriate equipment and handling facilities, will help ensure farm personnel remain safe and happy in their role.

Take pride in all of your farm's good and best practices towards animal welfare!

Additional resources



Care4Dairy.eu