

Summary: Welfare of the Dairy Cow

The Problem

Dairy cows are susceptible to a range of serious welfare issues. These include problems such as lameness and mastitis, infertility and high mortality or culling rates. Factors including pasture access and comfort affect physical health, but also improve psychological well being and expression of natural behaviours.

The Solution

The following key features must be addressed to improve dairy cow welfare:

Pasture Access



Providing pasture access has numerous beneficial effects on health by reducing the risk of mortality, mastitis, metritis, teat trampling, dystocia, retained placenta and ketosis. Good pasture improves hoof health by encouraging normal walking and providing a comfortable surface. Even brief periods on pasture help lame cows to recover, whereas long periods of winter housing increase lameness. Pasture should be well managed to reduce risks from inclement weather and low energy intake. Supplementary feeding is usually required for high yielding cows

or during transition to lactation. Cattle spend much lying time on pasture, which is important for rumination and rest, and have more freedom for social and grooming behaviour. Further benefits are reduced aggression between individuals and lower levels of stress when housed indoors later that day. Cows generally choose to be indoors in very cold or wet weather and prefer pasture in temperate conditions, if they have experience of it and their nutritional needs are met. In hot conditions, they prefer to have pasture access at night or during the day with shade. Ideally, cows should be provided a free choice between indoors and pasture. When pasture is unavailable, loafing areas with shade and shelter can provide outdoor access.

Lameness

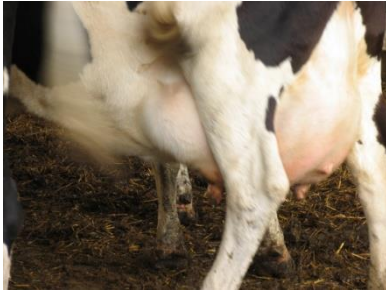
Lameness is a symptom of infectious disease (foot rot, digital dermatitis) or non-infectious disease (sole ulcer, sole haemorrhage, white line lesions). It is a serious, painful welfare problem which reduces body condition, milk yield, feed intake and fertility. In Europe, lameness levels have not reduced for 20 years. Factors which cause lameness include: housing (lower on pasture), stalls (too few or poorly fitting), flooring (dirty, wet and slippery or using automatic alley scrapers), overcrowding, stress, poor quality pasture, poor hoof maintenance, poor footbath use (dirty or inconsistent use), poor nutrition (poor silage management, food sorting) and breed (Holstein-Friesians are more susceptible). Management is essential to prevent lameness, but may be compromised due to insufficient labour, facilities, time, or money. DairyCo mobility scoring should be carried out frequently to identify and monitor lameness and cows showing signs of lameness should be promptly diagnosed and treated. A 2% level of lameness is considered achievable on commercial farms, but is often much higher in reality. Further measures to prevent lameness include using footbaths, hoof trimming when necessary, keeping housing clean and dry, good nutrition and providing comfortable recovery for lame cows.



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<http://www.compassioninfoodbusiness.com/media/5822652/welfare-of-the-dairy-cow.pdf>

Mastitis



Mastitis, the inflammation of udder tissue and the mammary gland, is a common disease caused by multiple factors. Cows with mild mastitis show minor changes in lying and milking behaviour, and those with moderate-to-severe cases become withdrawn and are restless during milking. Mastitis is financially detrimental to dairy farmers and reduces reproductive performance. Detecting and alleviating pain from mastitis is commonly overlooked. One of the main risk factors for mastitis is poor hygiene, which is more likely in cows that are high-yielding or have had multiple calves. The risk is reduced by: providing a clean environment for standing and lying, encouraging cows to stand after milking, providing pasture access and mixing heifers in the herd before calving to minimise stress. Six steps to control mastitis are: 1) hygienic teat management, 2) prompt identification and treatment of clinical mastitis, 3) dry cow management and therapy (for infected cows) 4) culling chronically affected cows, 5) milking machine maintenance and 6) good record keeping.

Comfort

Cows lie for up to 14 hours a day and become stressed (reducing food intake and milk yield) if lying is restricted. In Europe, most cows are housed in free-stall barns. However, these cause problems if too few stalls are provided for the herd or if they fit poorly. Stall surface affects comfort, as deep bedding is more comfortable than a mattress with a little bedding. Sand is an increasingly popular surface, which has benefits for cleanliness, hock condition and lameness, but is not always practical. Cow comfort has also been associated with improved milk yield. Housing in open barns or on pasture allows more flexibility in lying position and nearby companions. In eastern and mountainous regions in Europe, traditional tie-stall systems are still used, which severely reduce welfare by restricting movement and social interaction and causing injury.



Mortality

Mortality levels in dairy cows are increasing. Risks associated with higher mortality include increasing herd size and milk yield, respiratory disease and feeding total mixed ration (TMR). Involuntary culling (disposal) occurs mostly due to injury, mastitis, lameness or infertility. It can involve a trade-off between the best financial decision for the farmer and the humane endpoint for the cow, which should be avoided by investing in reducing the causes of mortality.

Milk Quality



There are significant nutritional benefits for human health from milk produced from cows fed pasture-based diets, compared to concentrated cereal and TMR diets. These include higher levels of important fatty acids, vitamins and minerals and a lower percentage of total milk fat.

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