

Welfare Issues in Dairy Cows

Physical wellbeing

Issue	Problem	Solution
Selection for high milk yield	Negative impact on lameness, mastitis, fertility, body condition, metabolic disease, behavioural expression Increased body & udder size	Include welfare parameters in breeding strategies. Ensure feeding & management fit the breed used Housing design – provide space, cubicle length and passage width appropriate for cow size
Lameness	Typical incidence: 40-50+% Poor housing design or condition, particularly concrete floors Poor condition of cow tracks Lying prevented by cows' avoidance of aggressive individuals	Improves with daily access to pasture Provide non-slip, non-slatted floors (eg. rubber matting) with no protrusions Avoid sharp stones & concrete. Use well-lit locations to allow tracks to dry out Avoid mixing social groups in winter housing, provide sufficient space & wide passageways
Mastitis	Typical levels: 35–70 cases per 100 cows. Routine dry cow therapy (prophylactic use of antibiotics)	Maintain hygiene levels (both in parlour & housing environment eg. clean lying areas)
Fertility	Average no. lactations 2.2 - 3.9, often infertile thereafter	Select for multiple genetic traits including fertility, not solely for high milk yield; use suitable cross-breed
Body condition	Thin or overweight cows (Scores of <2 or >4)	Carefully manage nutrition for right stage of lactation. Frequently monitor herd body condition at all production stages (ideal score is 2.5-3 at dry-off and calving) and adjust feeding plan appropriately
Metabolic disease	Hypocalcaemia (Milk fever), Ketosis, Laminitis, Acidosis, Abomasum displacement, Fatty liver	Complex balance between fibre, concentrates, milk yield potential. Provide pasture access in grazing season & sufficient roughage in diet (>60%)
Water access	Prevented by aggressive individuals	Provide multiple dispensers & sufficient space at feed bunk

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Cow comfort	<p>Temperature out of thermal comfort range eg. heat stress (>23°C)</p> <p>Weather exposure</p> <p>Inadequate housing: bedding, cubicle size & number</p> <p>Caesareans</p>	<p>Provide sufficient ventilation indoors. Provide shade/shelter outdoors & showers. Choose breed suited to local environment</p> <p>Provide choice of indoor / outdoor access</p> <p>Clean, thickly-bedded straw yards are most comfortable. If cubicles are used, ensure correct size to prevent hock burns/ lying in faeces, allow lateral lying & space to stand up within the stall, provide clean & comfortable bedding (sand best, if mattress/rubber mat used, provide straw/sawdust bedding too), provide more cubicles than cows (minimum 5%, ideally 20%)</p> <p>Use a breed/cross that can calve easily unassisted</p>
Transport	<p>Transport of unfit individuals</p> <p>Journey length</p> <p>Loading / unloading</p>	<p>Inspect individuals before travel and ensure no injury/illness, able to stand on four legs, suitable body condition</p> <p>Rear close to birth, slaughter at local facility. Reduce journey length (< 8hrs) including loading & unloading. Provide sufficient body & head space in transit, water, ventilation and maintain high driving standards, avoiding poor quality (bumpy/windy) roads and harsh braking & accelerating</p> <p>Use a non-slip ramp with a gentle slope (<20°)</p>
Health monitoring	<p>All health issues – if they're not measured they can't be improved</p>	<p>Develop a herd health plan with frequent veterinary visits, monitor health & welfare performance, set targets, plan action to reduce incidence rates, daily health inspections (twice daily for vulnerable cattle), independent audits</p>

Mental wellbeing

Issue	Problem	Solution
Physical and physiological restrictions	Tethering	Develop legislation to prohibit in EU and beyond
	Inadequate space allowance	Provide adequate space in housing (>8.6m ² /cow, ideally >10m ²); calculate space provision using bodyweight; allow outdoor space (max. 2 cows per acre or low-enough density to prevent ground damage)
	Fatigue	Use a multi-purpose breed. Provide adequate nutrition, veterinary health checks, sufficient lying time and natural daylight
Stockmanship	Flighty behaviour due to fear of humans	Ensure stockman-animal interactions are positive e.g. calm, quiet handling, stroking. Staff should be trained in handling & records kept of their training.
Stable groups	Disruption of long-lasting complex social groups	Keep cattle in stable groups (max. 50 per group, similar size/age except cow-calf groups). Group according to yield potential
	Male social isolation	Keep related males together & individual males with other animals eg. dry female cows
Mutilations (cause pain, stress)	Disbudding, dehorning, tail docking	Use polled breeds. Avoid routine mutilation; when necessary use anaesthesia, analgesia, performed by vet & low-stress restraint design
Handling	On-farm procedures and movement can cause stress	Positive training/habituation to novelty with feed/gentle handling – use low stress handling designs, eg. curved races
	Poor handling during transport, lairage, slaughter causes stress and injury	Use efficient handling system to minimise stress & utilise natural behaviour for calm movement e.g. use curved races; no contrasts in lighting/ distracting objects/ invasion of cows' flight zone/ electric goads
Transport	Causes stress due to social mixing	Avoid mixing cows from different social groups, minimise journey length - use local facilities.
Livestock markets	Stress, extended transport	Avoid selling via markets - sell directly.
Slaughter	Inadequate stunning	Always perform effective pre-slaughter stun & monitor stunning efficiency
	Slaughter procedures	Minimise stun-slaughter interval (<60s), use chest/ thoracic stick. Ensure frequent independent audits, CCTV monitoring, staff training, trained animal welfare officer present to monitor every process

Natural behaviour

Issue	Problem	Solution
Restriction of species-specific behavioural expression	Lack of: foraging, browsing, exercise, social behaviour eg. grooming, sitting with preferred partners, avoiding aggressors; normal up/down movement, laterally lying, North-South orientation of lying	Provide access to pasture: all cattle kept at pasture during grazing season throughout life, if housed over winter, provide access to outdoor exercise area, preferably pasture
	Unable to choose between indoor and outdoor access	Allow choice to go outside and able to adapt routine to temperature
	Lack of space for functional areas indoors	Tie stalls and cubicles provide less space than straw yards and pasture. Sufficient indoor space, loafing area of pasture to allow synchronised lying & feeding behaviours
	Inability to express maternal behaviour due to early calf removal	Ideally keep calf with dam (restricted milking) until natural weaning
	Lack of ability to groom	Provide cow brushes in housing, trees in pasture
	Artificial insemination – mildly stressful procedure	Use natural service where possible
Abnormal behaviours	Ruminating while standing, standing post-feeding	Provide more lying space in housing