

Welfare Issues in Broiler Chickens

Physical wellbeing

Welfare Issue	Problem	Solution
Fast growth	Poor walking ability, lameness, physiological/metabolic disorders (e.g. Ascities, Sudden death syndrome),	Use a slower-growing breed (slow <35g/day or intermediate <50g/day). Monitor health and welfare outcomes associated with growth rate
	Low activity levels due to poor walking ability and lethargy	Provide natural light & environmental enrichments
Crowding	High stocking density leads to poor walking ability, reduced behavioural freedom, poor litter quality, heat stress	Limit stocking density to a flat rate of 30kg/m ² for a 2.5kg bird; though ideally space allowance should be calculated allometrically (ie. 25kg/m ² for a 1.5kg bird)
Poor environmental conditions, including lack of enrichment	Temperature out of thermal comfort range or fluctuating, relative humidity inappropriate at different stages of growth cycle, poor air quality, wet litter, low activity levels, foot pad dermatitis, respiratory problems	Housing must provide good ventilation & insulation and clean, dry bedding. Provide enrichment including natural light, straw bales, perches and pecking objects.
	Outdoor access: weather exposure, predation	Protection should be provided in outdoor areas eg. trees, bushes, artificial shelters
Handling and Transport	Rough handling leads to broken limbs	Use mechanical catching, or upright catching supporting the body and wings, holding both legs. Use dim lighting
	Thermal stress, motion	Minimise journey duration (ideally <4hours including loading/unloading), use traditional breeds which have better thermoregulation. Use specialised vehicle design and temperature monitoring (eg. Automatic notification if threshold temperature reached). Careful driving by trained individuals
Slaughter	Live shackling - pain, distress; ineffective stunning	Use non-aversive gas stunning

Mental wellbeing

Welfare Issue	Problem	Solution
Feed restriction of broiler breeders (parents)	Chronic hunger	Avoid restricting feed. Use slow-growing breeds, so the need for feed restriction of breeding birds is reduced
Lack of activity	High growth rate, insufficient space Barren environment	Calculate space allowance using the allometric equation, to allow sufficient space per bird accounting for their bodyweight and activity level Provide enrichment and a varied environment e.g. natural light, straw bales, perches, pecking substrates that sustain interest
Sleep deprivation	Prolonged periods of artificial lighting (eg. 23hrs light)	Use natural light for housing. Provide at least 6-7hrs of darkness
Transport	Depopulation: stressful human handling Fasting/ water withdrawal, space restriction, social mixing of unfamiliar individuals, noise	Carry birds upright, individually, or use a catching machine. Carry crates in a calm, quiet manner. Dim barn lighting Avoid feed/water withdrawal (if essential, max. 8hrs for feed only). Minimise journey duration. Maintain social groups in crates, reduce stocking density
Slaughter	Shackling: stress, pain; pre-stun shocks. Aversive gases (breathing difficulty, irritant) eg. Carbon dioxide	Avoid shackling live birds. Controlled atmosphere stunning of birds in crates first with non-aversive gas (eg. argon) is more humane. Frequent independent audits, CCTV, assigned animal welfare officer Use gases shown to be non-aversive

Natural behaviour

Welfare Issue	Problem	Solution
Restricted expression of species-specific behaviours	<p>Crowding (eg. at stocking densities above 30kg/m²)</p> <p>Barren environment</p>	<p>Calculate space allowance using the allometric equation, to allow sufficient space per bird accounting for their bodyweight</p> <p>Provide litter to encourage foraging; enrichment e.g. straw bales, perches and pecking substrates to increase activity</p>
Frustration of highly-motivated natural behaviour	<p>Lack of foraging: searching, pecking, scratching, feeding. Maintenance: preening, stretching, wing-flapping, resting. Walking, running, flying</p> <p>Lack of dust-bathing, perching, ranging</p>	<p>Provide outdoor access, litter in housing (min. 1/3 ground covered). Provide pecking material. Provide enough space (min. 5000cm²/bird). In housing: natural light, natural dark/light cycle</p> <p>Provide dust-bathing material eg. sand. Provide fixed perches appropriate for and used by the breed. Provide sufficient space and resources, eg. trees, bushes, artificial shelters, sand flooring</p>
Lack of outdoor access	<p>No outdoor space provided</p> <p>Limited ranging within the outdoor area provided</p>	<p>Provide sufficient outdoor access for all birds</p> <p>Provide shelter (e.g. trees, bushes, artificial shelters) so chickens feel protected and provide outdoor access from early age</p>