


### Scenario 1 - Current beef with current lameness levels

Score sheet

Name of scorer: Expert 9

Comments Round 1

Comments Round 2

Welfare principles	Welfare criteria		1st round			2nd round			
			score	90% certain lower bound	90% certain upper bound	score	90% certain lower bound	90% certain upper bound	
Good feeding	1	Provision and access to food. Animals should have appropriate access to the quantity and quality of appropriate foodstuffs for health and wellbeing.	65	35	80	65	35	80	some diets insufficient fibre, lameness will affect access for some animals.
	2	Provision and access to water. Animals should have appropriate access to the quantity and quality of water for health and wellbeing.	85	50	90	85	50	90	
Good housing	3	Animals should have comfort when resting.	50	30	70	50	30	70	highly variable, some animals kept on slatted floors, high stocking densities,
	4	Animals should have thermal comfort being neither too hot nor too cold.	70	50	90	70	50	90	calves - too cold in some conditions.
	5	Animals should have sufficient space to move freely,	55	40	80	55	40	80	many animals will have lots of space, but not those in feedlots, or high stocking density indoor systems.
Good health	6	Animals should be free from injuries and disorders (e.g. skin conditions, lameness, bone fractures etc.).	55	25	60	55	25	60	injuries can be common - wounds, fractures (in very young calves). Lice and other ectoparasites, ringworm, flying insects, rain scald, papillomas can affect skin. Some non-disease causes of lameness
	7	Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	50	20	70	50	20	70	disease prevalence can be high and veterinary advice not routinely obtained - respiratory conditions, IB, BVD, parasites (e.g. lungworm, flukes). Lameness prevalence (mostly infectious) affecting at least 10%. New challenges e.g. Schmallenberg.
	8	Animals should not suffer pain - for example as a result of poor management, handling, surgical or other procedures, slaughter etc.	60	40	80	60	40	80	many beef cattle undergo castration or debudding, rough handling (goads), transport, markets. Dystocia and painful birth.
Appropriate behaviour	9	Animals should be able to express normal, non-harmful social behaviours (such as grooming and social bonding).	50	35	65	50	35	65	Highly variable between systems. Weaning (even if not as young as dairy) in some production systems, high stocking densities in indoor systems have negative effects. But some extensive grass systems can provide good social contact and allow for long-lasting attachments.
	10	Animals should be able to express other normal behaviours (e.g. foraging, exploring).	60	50	70	60	50	70	Highly variable between systems.
	11	Animals should be handled well with positive and not negative animal-human relationships.	55	25	75	55	25	75	less handling than dairy cows but many beef cattle not 'tame' and so handling can be rough.
	12	Additional aspects not already adequately covered above in relation to the balance between positive and negative affective states for animals.							Answers partly influenced by paper Dairy vs Beef (Mandel et al., 2022) where I was a co-author.

### Scenario 2 - Beef production with 3% prevalence lameness mobility scores 2/3


Score sheet

Name of scorer: Expert 9

### Expert 9

Comments Round 1

## Comments Round 2

Welfare principles	Welfare criteria		1st round	90% certain	90% certain	2nd round	90% certain	90% certain	
			score	lower bound	upper bound	score	lower bound	upper bound	
Good feeding	1	Provision and access to food. Animals should have appropriate access to the quantity and quality of appropriate foodstuffs for health and wellbeing.	70	45	80	70	45	80	competition for access reduced if animals more mobile
	2	Provision and access to water. Animals should have appropriate access to the quantity and quality of water for health and wellbeing.	90	55	95	90	55	95	
Good housing	3	Animals should have comfort when resting.	55	30	70	55	30	70	70 reduced lameness will increase comfort for some animals but problems with slats, slurry, stocking density still problematic
	4	Animals should have thermal comfort being neither too hot nor too cold.	70	50	90	73	55	90	
	5	Animals should have sufficient space to move freely.	55	40	80	55	40	80	
Good health	6	Animals should be free from injuries and disorders (e.g. skin conditions, lameness, bone fractures etc.).	65	35	70	65	35	70	
	7	Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	55	30	70	55	30	70	
	8	Animals should not suffer pain - for example as a result of poor management, handling, surgical or other procedures, slaughter etc.	65	45	80	65	45	80	
Appropriate behaviour	9	Animals should be able to express normal, non-harmful social behaviours (such as grooming and social bonding).	52	35	65	52	35	65	75 I was going to give a higher score based on healthier animals needed less handling but perhaps the steps needed to maintain better foot condition are stressful/dangerous/rough in themselves. Overall have decided on no change rather than a decrease in score.
	10	Animals should be able to express other normal behaviours (e.g. foraging, exploring).	65	50	70	65	50	70	
	11	Animals should be handled well with positive and not negative animal-human relationships.	55	25	75	55	25	75	
	12	Additional aspects not already adequately covered above in relation to the balance between positive and negative affective states for animals.							

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