

Scenario 1 - Current beef with current lameness levels

Score sheet			Name of scorer: Expert 1			Comments Round 1			Comments Round 2		
Welfare principles	Welfare criteria		1st round score	90% certain lower bound	90% certain upper bound	2nd round score	90% certain lower bound	90% certain upper bound	Assumed that the figures of 8% (2-21) of finishers and 14 (0-43) is an underestimate and that 15% plus 20% ie one third of cattle affected		
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.	60	55	70	60	55	70	Beef cattle typically have ad lib access to feed, but lameness may cause them to lie down more which may restrict their access to feed		
	2	Provision and access to water. Animals should have appropriate access to the quantity and quality of water for health and wellbeing.	75	60	80	77	60	85	Access to water is typically ad lib and readily available, but lameness may restrict the animal's ability to access it freely.		
Good housing	3	Animals should have comfort when resting.	65			65			Cattle outdoors will have good access to lying areas. Housed cattle sometimes experience dirty bedding and over-stocking		
	4	Animals should have thermal comfort being neither too hot nor too cold.	60	45	75	60	45	75	Cattle outdoors will have the option to seeks shade/shelter where it is available, winter temperatures can present an issue. Finishing cattle in the latter stages of life may be a bit hot. Lameness may impair an animal's ability to move to seek shade/shelter.		
	5	Animals should have sufficient space to move freely.	68	60	80	68	60	80	Beef cattle outdoors have good access to free areas to move around. Dairy/beef calves and finishing cattle indoors may have less access to space to move.		
Good health	6	Animals should be free from injuries and disorders (e.g. skin conditions, lameness, bone fractures etc.).	55	45	65	55	45	65	If we assume that farmers underestimate lameness, and 25 % of finishing cattle are lame, and 15% of suckler cows (and bulls) are lame, then most animals are still OK.		
	7	Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	65	55	75	62	55	75	Metabolic acidosis a problem but only in finishing animals on high conce diets. Dairy beef calves and housed calves suffer from pneumonia		
	8	Animals should not suffer pain - for example as a result of poor management, handling, surgical or other procedures, slaughter etc.	60	50	80	60	50	80	Lameness is painful, but animals also branded		
Appropriate behaviour	9	Animals should be able to express normal, non-harmful social behaviours (such as grooming and social bonding).	70	60	80	68	60	80	Cattle outdoors have a good opportunity to express normal social behaviour. Indoor-housed animals may be a bit limited by space, and lame animals may be restricted		
	10	Animals should be able to express other normal behaviours (e.g. foraging, exploring).	70	60	80	68	60	80	Cattle outdoors should be able to freely express foraging and exploration. Indoor-housed animals may have less access to space or unenriched space. Lame animals may be a bit restricted.		
	11	Animals should be handled well with positive and not negative animal-human relationships.	50	30	80	55	35	80	Most of the interactions with humans are for negtive events (castration, vaccinations etc.). Treatment for lameness can be painful		
	12	Additional aspects not already adequately covered above in relation to the balance between positive and negative affective states for animals.	60	50	80	62	50	80			

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

Score sheet			Name of scorer: Expert 1			Comments Round 1			Comments Round 2		
Welfare principles	Welfare criteria		1st round score	90% certain lower bound	90% certain upper bound	2nd round score	90% certain lower bound	90% certain upper bound	Assumed that 3% are lame now		
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	60	85	68	60	85	Most not lame but feed type still restricted in housed animals and calves		
	2	Provision and access to water. Animals should have appropriate access to the quantity and quality of water for health and wellbeing.	80	65	85	80	65	85	Most not lamee, so easier to get water, but water may not of good quality in outdoor troughs and indoors on occasion		
Good housing	3	Animals should have comfort when resting.	68	60	80	70	60	80	Still wet and muddy outdoors on occasion and dirty bedding indoors. To achieve this, you might need to reduce no. of slatted systems and improve bedding, which would improve resting quality.		
	4	Animals should have thermal comfort being neither too hot nor too cold.	68	55	80	65	55	80	Cold conditions still affect animals at times in winter and shade and shelter not always available. Lack of lameness makes it easier to move to shade/shelter		
	5	Animals should have sufficient space to move freely.	68	60	80	70	60	80	Beef cattle outdoors will have a lot of space, but finishing animals will have less space		
Good health	6	Animals should be free from injuries and disorders (e.g. skin conditions, lameness, bone fractures etc.).	70	60	80	68	60	80	With lameness out of the picture, this improves welfare, but there may be other skin conditions		
	7	Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	65	55	75	68	62	75	Many types of lameness caused by infectious conditions. Pnuemonia a problem for calves, metabolic disease an issue for finishing cattle		
	8	Animals should not suffer pain - for example as a result of poor management, handling, surgical or other procedures, slaughter etc.	70	65	75	68	65	75	Improving lameness will be a big plus, but branding, slaughter, poor management are still issues		
Appropriate behaviour	9	Animals should be able to express normal, non-harmful social behaviours (such as grooming and social bonding).	75	60	85	75	65	85	Outdoorr cattle have good opportunities to express social behaviour. Reducing lameness will facilitate this. Indoor cattle may be hampered by high stocking density		
	10	Animals should be able to express other normal behaviours (e.g. foraging, exploring).	75	60	85	75	60	80	Outdoor animals will be able to express foraging and exploring. Improving lameness will facilitate this behaviour as well. May be a bit restricted in indoor systems.		
	11	Animals should be handled well with positive and not negative animal-human relationships.	55	40	80	55	40	80	Most interactions with humans will be negative (vaccination, AI etc). But at least lameness treatment will be taken out		
	12	Additional aspects not already adequately covered above in relation to the balance between positive and negative affective states for animals.	68	55	75	68	55	75	Beef cattle have freedom in outdoors systems. Less so for calves and housed animals		