

Scenario 1 - Current dairy production

Score sheet			Name of scorer: Expert 8			Comments			
Welfare principles	Welfare criteria	<div><div>0 – Lowest level of welfare</div><div>←————→</div><div>Highest level of welfare – 100</div></div>	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	65	95	70	65	95	Most cows are well fed, even when lame, but score 3 cows can alter feed routine and have reduced dry matter intakes. Negative energy balance profiles are more influenced by periods of grazing.
	2	Provision and access to water. Animals should have appropriate access to the quantity and quality of water for health and wellbeing.	85	75	95	85	75	95	Water intakes rarely compromised. Dominant cows could displace lame during periods of heat stress
Good housing	3	Animals should have comfort when resting.	50	30	80	50	30	80	The average farm is mat/mattress cubicle or grazing. Lame cows have increased risk of injury and may struggle rising in cubicles
	4	Animals should have thermal comfort being neither too hot nor too cold.	80	70	90	80	70	90	Most cows are thermally comfortable in the UK except for some periods of high THI in the summer. This is not influenced by lameness.
	5	Animals should have sufficient space to move freely.	65	50	80	65	50	80	Most cows need to be housed but even with low stocking rates, cows don't roam more. However, lame cows show increased area fidelity.
Good health	6	Animals should be free from injuries and disorders (e.g. skin conditions, lameness, bone fractures etc.).	50	40	90	50	40	90	Lame cows are more likely to injure themselves
	7	Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	50	40	90	50	40	90	Lame cows are diseased and suffer secondary metabolic disease
	8	Animals should not suffer pain - for example as a result of poor management, handling, surgical or other procedures, slaughter etc.	40	30	70	40	30	70	Lameness and treatment procedures can be painful.
Appropriate behaviour	9	Animals should be able to express normal, non-harmful social behaviours (such as grooming and social bonding).	50	40	80	50	40	80	Lame cows experience a fall in social heirarchy
	10	Animals should be able to express other normal behaviours (e.g. foraging, exploring).	80	70	95	70	70	95	While time budgets are altered, lame cows generally continue feeding, just eat more quickly which reduces foraging behaviour
	11	Animals should be handled well with positive and not negative animal-human relationships.	40	30	50	40	30	50	Lame cows need treating and loading into crushes. They can be difficult to handle, and fall in crushes. They take time to move around,
	12	Additional aspects not already adequately covered above in relation to the balance between positive and negative affective states for animals.	30	20	40	30	20	40	Lame cows have many aspects of compromised welfare. While only 30% of herd is affected, this translates to most of the herd having at least one lame event in the year

Scenario 2 - Dairy production with only 5% lameness score 2/3

Score sheet			Name of scorer: Expert 8			Comments			
Welfare principles	Welfare criteria	<div><div>0 – Lowest level of welfare</div><div>←————→</div><div>Highest level of welfare – 100</div></div>	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.	90	65	95	90	65	95	Herds with excellent foot health often have the best BCS and energy balance profiles. 5% herd affected so some compromised.
	2	Provision and access to water. Animals should have appropriate access to the quantity and quality of water for health and wellbeing.	90	80	95	90	80	95	Cows are rarely without palatable water. Sound cows are not displaced. Some herd lame and some farms are overstocked and don't clean water
Good housing	3	Animals should have comfort when resting.	60	40	80	60	40	80	The average farm has uncortable cubicles.
	4	Animals should have thermal comfort being neither too hot nor too cold.	80	70	90	80	70	90	This is not really affected by lameness
	5	Animals should have sufficient space to move freely.	80	60	90	75	60	90	Sound cows will roam more freely. I adjusted my score to reflect for 8 weeks on 10% units calf movements are restricted in hutches
Good health	6	Animals should be free from injuries and disorders (e.g. skin conditions, lameness, bone fractures etc.).	70	60	90	70	60	90	Fewer injuries due to lameness.
	7	Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	70	60	90	70	60	90	Less lameness and secondary disease
	8	Animals should not suffer pain - for example as a result of poor management, handling, surgical or other procedures, slaughter etc.	60	40	70	60	40	70	Lameness is a painful conditions, even if only 5%
Appropriate behaviour	9	Animals should be able to express normal, non-harmful social behaviours (such as grooming and social bonding).	60	40	80	60	40	80	Fewer displacements and less bullying
	10	Animals should be able to express other normal behaviours (e.g. foraging, exploring).	85	70	95	75	70	95	Lame cows can forage - but get displaced and so their feeding will be in fewer bouts of longer duration
	11	Animals should be handled well with positive and not negative animal-human relationships.	60	40	70	60	40	70	Fewer lame cows to handle in the crush which they find stressful.
	12	Additional aspects not already adequately covered above in relation to the balance between positive and negative affective states for animals.	60	50	70	60	50	70	Herds with well-managed foot health have happier systems overall.