

Scenario 1 - Current dairy production

Score sheet

Welfare principles	Welfare criteria	<div><div></div><div>0 = Lowest level of welfare</div><div></div><div>Highest level of welfare = 100</div></div>	1st round score	90% certain lower bound	90% certain upper bound	2nd round 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.	40	30	60	50	40		70 During lactation dairy cows are often in negative energy balance with food unable to meet their energy requirements. This situation will be exacerbated by a 30% lameness prevalence.
	2	Provision and access to water. Animals should have appropriate access to the quantity and quality of water for health and wellbeing.	60	50	60	70	60		80 Lamé cows are likely to have issues accessing water troughs and this will impair welfare.
Good housing	3	Animals should have comfort when resting.	50	30	60	50	30		60 Cubicles can cause issues for cow comfort (e.g. hock lesions) and this discomfort will be further exacerbated if the animal is lame as they may have issues securing a suitable resting area.
	4	Animals should not suffer pain - for example being neither too hot nor too cold.	60	50	70	60	50		70 With appropriate management and housing, this aspect should be adequately controlled. However, there can be situations that will result in animals being outside their thermoneutral zone. This could be especially possible for lame cows.
	5	Animals should have sufficient space to move freely.	50	40	70	50	40		70 To some extent this is dependent on the production system. At pasture cows will have more space freedom than indoors. This will also be influenced by stocking density. There is scope for space restrictions to cause welfare issues associated with competition and a lack of appropriate resting areas.
Good health	6	Animals should be free from injuries and disorders (e.g. skin conditions, lameness, bone fractures etc.).	40	30	60	40	30		60 With the current scenario there is a high prevalence of lameness that will compromise welfare. Within indoors systems there are also high levels of lesions (e.g. hock lesions).
	7	Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	30	20	50	30	20		50 Dairy cattle are at risk for a number of diseases that negatively impact welfare. Important production diseases including, mastitis, uterine disease, milk fever, ketosis, acidosis, respiratory disease, infectious causes of lameness.
	8	Animals should not suffer pain - for example as a result of poor management, handling, surgical or other procedures, slaughter etc.	50	40	60	50	40		60 Within this system early life procedures (e.g. disbudding) may cause a degree of pain. Lameness will also be a major source of pain, as well as other conditions. There is also scope for pain associated with husbandry procedures (e.g. fertility procedures and calving) and during milking.
Appropriate behaviour	9	Animals should be able to express normal, non-harmful social behaviours (such as grooming and social bonding).	60	50	70	50	40		60 Under commercial conditions dairy cattle typically will have the opportunity to perform social behaviour. There may be challenges to this in the indoor housed environment. In addition, lame animals may be less motivated to perform these due to pain associated with movement. Lame animals may also be more susceptible to aggression and other negative social behaviour.
	10	Animals should be able to express other normal behaviours (e.g. foraging, exploring).	50	40	70	50	40		70 During indoor housing this aspect of behaviour will be constrained. For those with outdoor pasture access they will have more opportunities to engage in this behaviour. Lame animals may be impaired in performing these behaviours.
	11	Animals should be handled well with positive and not negative animal-human relationships.	60	40	70	50	30		60 This aspect is highly dependent on the attitudes and quality of stock persons handling the animals. Positive attitudes and handling can have a beneficial effect on welfare. Likewise, poor attitudes and handling can severely compromise welfare. This could be particularly problematic for lame animals that have mobility issues.
	12	Additional aspects not already adequately covered above in relation to the balance between positive and negative affective states for animals.	50	40	60	50	40		60 During the indoor housed period cattle can be exposed to noise and other environmental stressors that compromise welfare. It is also a relatively barren environment with limited opportunities for positive experiences. This may be particularly challenging for lame animals that may be less willing to move away from potential stressors due to pain associated with movement.

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

Score sheet

Welfare principles	Welfare criteria	<div><div></div><div>0 = Lowest level of welfare</div><div></div><div>Highest level of welfare = 100</div></div>	1st round score	90% certain lower bound	90% certain upper bound	2nd round 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.	50	40	60	60	50		70 During lactation dairy cows are often in negative energy balance with food unable to meet their energy requirements. At a 5% lameness prevalence more cows would be able to access food.
	2	Provision and access to water. Animals should have appropriate access to the quantity and quality of water for health and wellbeing.	70	60	80	70	60		80 Depending on the system and level of management, there is scope for some animals to not have adequate easy access to sufficient water, with additional potential issues of water quality in some cases. However, in well managed systems, the importance of this aspect is recognised.
Good housing	3	Animals should have comfort when resting.	60	50	90	60	50		80 To a large extent this will be dependent on the system. At pasture cows can have a very comfortable resting area. However, indoors cubicles can compromise cow comfort, especially if they are not a suitable size and design. With the lower level of lameness in this scenario it should have a positive benefit for cow comfort.
	4	Animals should have thermal comfort being neither too hot nor too cold.	70	50	80	70	50		80 With appropriate management and housing, this aspect should be adequately controlled. However, there can be situations that will result in animals being outside their thermoneutral zone.
	5	Animals should have sufficient space to move freely.	60	50	70	60	50		70 This will be dependent on the production system, management, quality of housing and stock density. If well managed and when at pasture cattle should have sufficient space to move fairly freely. However, within certain confined systems and at high stocking densities this aspect will be constrained and impair welfare.
Good health	6	Animals should be free from injuries and disorders (e.g. skin conditions, lameness, bone fractures etc.).	70	50	80	60	50		80 The lower lameness prevalence with this scenario will have a benefit in this regard. Depending on the system and management there could still be issues with hock lesions.
	7	Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	40	30	60	50	40		60 Dairy cattle are at risk for a number of diseases that negatively impact welfare. Important production diseases including, mastitis, uterine disease, milk fever, ketosis, acidosis, respiratory disease, infectious causes of lameness.
	8	Animals should not suffer pain - for example as a result of poor management, handling, surgical or other procedures, slaughter etc.	60	50	70	60	50		70 Within this system early life procedures (e.g. disbudding) may cause a degree of pain. There is also scope for pain associated with husbandry procedures (e.g. fertility procedures and calving) and during milking. Within this scenario there will be less pain associated with lameness.
Appropriate behaviour	9	Animals should be able to express normal, non-harmful social behaviours (such as grooming and social bonding).	70	60	80	60	50		70 Under commercial conditions dairy cattle typically will have the opportunity to perform social behaviour. There may be challenges to this in the indoor housed environment.
	10	Animals should be able to express other normal behaviours (e.g. foraging, exploring).	60	50	70	60	50		70 During indoor housing this aspect of behaviour will be constrained. For those with outdoor pasture access they will have more opportunities to engage in this behaviour.
	11	Animals should be handled well with positive and not negative animal-human relationships.	60	40	70	60	40		70 This aspect is highly dependent on the attitudes and quality of stock persons handling the animals. Positive attitudes and handling can have a beneficial effect on welfare. Likewise, poor attitudes and handling can severely compromise welfare.
	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 During the indoor housed period cattle can be exposed to noise and other environmental stressors that compromise welfare. It is also a relatively barren environment with limited opportunities for positive experiences.

Name of scorer: Expert 9

Comments

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