

Scenario 1 - Colony cage egg production

Score sheet		Name of scorer: Expert 8		Comments Round 1									
Welfare principles	Welfare criteria	1st round score	10% certain lower bound	10% certain upper bound	2nd round score	10% certain lower bound	10% certain upper bound						
Good feeding	1 Prevention and access to food: Animals should have appropriate access to the quantity and quality of appropriate foodstuffs for health and well-being.	85	70	95	75	60	90	15 Food is available at all its but fibre content is relatively low and there is a lack of choice or anything fresh. Food quality is reduced after peak production and many birds are this by end of lay. Food is withdrawn before depopulation and depopulation withdrawal early, with little monitoring of this.					
	2 Prevention and access to water: Animals should have appropriate access to the quantity and quality of water for health and well-being.	95	90	100	95	90	100	100 Water is available through six nipple drinkers which may constrain natural drinking. Rarely nipples can be blocked.					
Good housing	3 Animals should have comfort when resting.	50	40	60	50	40	60	60 Most birds will be reared in floor systems generally with good options for comfort. At lay, colony cages contain perches but these can be competition for these, and they may not be situated in preferred places. There can be a lot of disturbance from other hens during daytime. Night time birds may be motivated to roost at height and this is not possible. Most hens and incubators may reduce comfort in general.					
	4 Animals should have thermal comfort being neither too hot nor too cold.	85	70	95	85	70	95	80 Rearing houses and colony cage systems are usually warm. Occasional signs of heat stress seen on hot days, but this is not common in UK.					
Good health	5 Animals should be free from injury and disorders (e.g. skin conditions, lameness, bone fractures etc.).	45	30	60	45	30	60	50 Hard to define freely. Birds can move relatively freely during rear. In CC birds are able to perform important comfort behaviours such as preening, wing stretching but they are not able to jump or fly, or explore.					
	6 Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	55	45	65	60	45	65	60 Up to 50% of hens may have heel fractures, mostly of mild severity, and after 40 weeks, also heel deformation and a higher rate of bone fracture at depopulation than other systems. Plunge conditions likely to have deteriorated towards end of lay due to abrasion, and more vulnerable to infection following pads or scratches. There may be some pain associated with early laying. Feet can become injured on metal floors, hardwood can be too painful.					
Appropriate behaviour	7 Animals should be able to express normal, non-harmful social behaviours (such as preening and social bonding).	40	30	50	40	30	50	65 Hygiene is relatively good but not perfect. Mites can cause problems in CC systems, vaccination controls a lot of other diseases. Antibiotics can be administered relatively easily if needed (with withdrawal periods). Hens can suffer from fatty liver and other metabolic diseases.					
	8 Animals should be able to express other normal behaviours (e.g. foraging, exploring, territorial or other procedures, slaughter etc.).	70	50	80	70	50	80	60 Not all birds in CC will be beak trimmed, but many still are. Even using IR methods, this still causes some pain. Rarely birds can be trapped in cages. Catching and transport to lairage accommodation may cause some pain, catching and transport to slaughter will be rougher as birds have little value - injuries at this point will be sustained. Mostly however, hens are handled very infrequently.					
	9 Animals should be handled well with positive and not negative animal-human relationships.	40	30	50	40	30	50	50 Birds can express many of these behaviours during rear. They lack a mother figure to regulate their behaviour but most adapt relatively well to CC harmful social behaviours may decrease - aggression, competition - and birds have little opportunity to escape.					
	10 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	60 Mostly possible during rearing but only to very limited extent in CC. If housed in CC there is a reduction in ability to conduct these behaviours. Preening is possible but does nothing very constrained, other comfort activities performed at lower levels in cages than other systems.					
		30	20	40	30	20	40	70 A relatively high score reflects a lack of handling - birds are rarely handled and this is probably a good thing. However, they also rarely see people (especially birds on top bars) and so may be very heightened at depopulation.					

Comments Round 2

Food is available at all its but fibre content is relatively low and there is a lack of choice or anything fresh. Food quality is reduced after peak production and many birds are this by end of lay. Food is withdrawn before depopulation and depopulation withdrawal early, with little monitoring of this.

Water is available through six nipple drinkers which may constrain natural drinking. Rarely nipples can be blocked.

Most birds will be reared in floor systems generally with good options for comfort. At lay, colony cages contain perches but these can be competition for these, and they may not be situated in preferred places. There can be a lot of disturbance from other hens during daytime. Night time birds may be motivated to roost at height and this is not possible. Most hens and incubators may reduce comfort in general.

Rearing houses and colony cage systems are usually warm. Occasional signs of heat stress seen on hot days, but this is not common in UK.

Hard to define freely. Birds can move relatively freely during rear. In CC birds are able to perform important comfort behaviours such as preening, wing stretching but they are not able to jump or fly, or explore.

Up to 50% of hens may have heel fractures, mostly of mild severity, and after 40 weeks, also heel deformation and a higher rate of bone fracture at depopulation than other systems. Plunge conditions likely to have deteriorated towards end of lay due to abrasion, and more vulnerable to infection following pads or scratches. There may be some pain associated with early laying. Feet can become injured on metal floors, hardwood can be too painful.

Hygiene is relatively good but not perfect. Mites can cause problems in CC systems, vaccination controls a lot of other diseases. Antibiotics can be administered relatively easily if needed (with withdrawal periods). Hens can suffer from fatty liver and other metabolic diseases.

Not all birds in CC will be beak trimmed, but many still are. Even using IR methods, this still causes some pain. Rarely birds can be trapped in cages. Catching and transport to lairage accommodation may cause some pain, catching and transport to slaughter will be rougher as birds have little value - injuries at this point will be sustained. Mostly however, hens are handled very infrequently.

Birds can express many of these behaviours during rear. They lack a mother figure to regulate their behaviour but most adapt relatively well to CC harmful social behaviours may decrease - aggression, competition - and birds have little opportunity to escape.

Mostly possible during rearing but only to very limited extent in CC. If housed in CC there is a reduction in ability to conduct these behaviours. Preening is possible but does nothing very constrained, other comfort activities performed at lower levels in cages than other systems.

A relatively high score reflects a lack of handling - birds are rarely handled and this is probably a good thing. However, they also rarely see people (especially birds on top bars) and so may be very heightened at depopulation.

CC systems are more hygienic, other birds, with no natural light. Birds experience little stimulation and so can show exaggerated fear responses if disturbances occur.

Scenario 2 - Barn egg production

Score sheet		Name of scorer: Expert 8		Comments Round 1									
Welfare principles	Welfare criteria	1st round score	10% certain lower bound	10% certain upper bound	2nd round score	10% certain lower bound	10% certain upper bound						
Good feeding	1 Prevention and access to food: Animals should have appropriate access to the quantity and quality of appropriate foodstuffs for health and well-being.	85	70	95	75	60	90						
	2 Prevention and access to water: Animals should have appropriate access to the quantity and quality of water for health and well-being.	95	90	100	95	90	100						
Good housing	3 Animals should have comfort when resting.	70	50	80	70	50	80	80 Birds can roost at height in MT systems (majority of barns). They can rest in the litter area under or around the bars during the daytime. However, not all birds can access all areas due to lack of housing, physical ability or pressure from other birds. Generally sufficient perches and other elevated places are provided and most birds will be settled at night. Additional space and ability to move increases ability to thermoregulate during hot weather.					
	4 Animals should have thermal comfort being neither too hot nor too cold.	85	75	95	85	75	95	70 Most birds can move freely but some are constrained. There can be very uneven bird distributions throughout the house with areas of very low and very high stocking density, and even smothering in some cases. Birds are then trapped. Some birds never fully engaged but all experience cold and danger of ramps to fracture and movement is very variable.					
Good health	5 Animals should be free from injury and disorders (e.g. skin conditions, lameness, bone fractures etc.).	45	30	60	45	30	60	60 Damage is higher than for CC and on risk of fractures at depopulation is lower: however, risk of cellulitis is higher. The highest rates of fractures appear to be reducing with use of ramps and consideration of strains that are most suited to MT systems.					
	6 Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	55	45	65	60	45	65	65 Hygiene is a little more difficult to maintain but most diseases are controlled with vaccination.					
Appropriate behaviour	7 Animals should be able to express normal, non-harmful social behaviours (such as preening and social bonding).	60	40	70	60	40	70	75 Beak trimming is more likely in barns than CC, yet damage due to FP may still be more severe. It is a complex problem not yet solved.					
	8 Animals should be able to express other normal behaviours (e.g. foraging, exploring, territorial or other procedures, slaughter etc.).	60	40	70	60	40	70	70 Hens don't have a high motivation to perform non-harmful social behaviours but generally they tolerate each other in barn systems. However, there can be problems with harmful social behaviour - aggression, peck order, competition for resources.					
	9 Animals should be handled well with positive and not negative animal-human relationships.	60	50	70	60	50	70	70 Much more opportunity to perform these behaviours but not all birds get to use the litter area on the floor.					
	10 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	70 Potentially birds become more habituated to people walking the house and so may be less fearful than birds in CC.					

Comments Round 2

Birds can roost at height in MT systems (majority of barns). They can rest in the litter area under or around the bars during the daytime. However, not all birds can access all areas due to lack of housing, physical ability or pressure from other birds. Generally sufficient perches and other elevated places are provided and most birds will be settled at night. Additional space and ability to move increases ability to thermoregulate during hot weather.

Most birds can move freely but some are constrained. There can be very uneven bird distributions throughout the house with areas of very low and very high stocking density, and even smothering in some cases. Birds are then trapped. Some birds never fully engaged but all experience cold and danger of ramps to fracture and movement is very variable.

Damage is higher than for CC and on risk of fractures at depopulation is lower: however, risk of cellulitis is higher. The highest rates of fractures appear to be reducing with use of ramps and consideration of strains that are most suited to MT systems.

Hygiene is a little more difficult to maintain but most diseases are controlled with vaccination.

Beak trimming is more likely in barns than CC, yet damage due to FP may still be more severe. It is a complex problem not yet solved.

Hens don't have a high motivation to perform non-harmful social behaviours but generally they tolerate each other in barn systems. However, there can be problems with harmful social behaviour - aggression, peck order, competition for resources.

Much more opportunity to perform these behaviours but not all birds get to use the litter area on the floor.

Potentially birds become more habituated to people walking the house and so may be less fearful than birds in CC.

Still a fast, noisy environment with no natural light.

Free-range egg production (not including organic)

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Welfare principles	Welfare criteria	1st round score	10% certain lower bound	10% certain upper bound	2nd round score	10% certain lower bound	10% certain upper bound						
Good feeding	1 Prevention and access to food: Animals should have appropriate access to the quantity and quality of appropriate foodstuffs for health and well-being.	85	70	95	75	60	90	80 Some birds may get additional access to food variety e.g. insects, vegetation.					
	2 Prevention and access to water: Animals should have appropriate access to the quantity and quality of water for health and well-being.	95	90	100	95	90	100						
Good housing	3 Animals should have comfort when resting.	70	50	80	70	50	80						
	4 Animals should have thermal comfort being neither too hot nor too cold.	60	45	70	60	45	70	70 Birds are often exposed to cold. In less well designed systems rain or damp can enter directly or on birds' feet. Shelters should be provided outside perches but wind can also enter and the house is generally colder than in CC or barn systems. Hens are susceptible to cold especially if plumage cover is low and body condition poor.					
Good health	5 Animals should be free from injury and disorders (e.g. skin conditions, lameness, bone fractures etc.).	50	30	60	50	30	60	60 Maximum potential to move but not all birds access the range, and many birds do not range far from the house, depending on design features and steps taken to acclimatise birds.					
	6 Animals should be free from disease, including metabolic conditions, with high standards of health care and hygiene.	45	35	60	45	35	60	60 Good ranging should increase bone strength and reduce risk of severe FP. Predation may cause some injuries. Risk of bone damage due to cellulitis in winter house warm.					
Appropriate behaviour	7 Animals should be able to express normal, non-harmful social behaviours (such as preening and social bonding).	60	40	70	60	40	70	60 More risk of disease, particularly parasites (protozoans, worms), and exposure to wild bird diseases. Hygiene less easy to control.					
	8 Animals should be able to express other normal behaviours (e.g. foraging, exploring, territorial or other procedures, slaughter etc.).	75	50	80	80	60	80	75 Non-organic birds very likely to be beak trimmed.					
	9 Animals should be handled well with positive and not negative animal-human relationships.	60	50	70	60	50	70						
	10 Additional aspects not already adequately covered above in relation to the balance between positive and negative affective states for animals.	50	30	70	50	30	70	70 Natural light, and more ability to choose - can get away from noise or poor air quality.					

Comments Round 2

Some birds may get additional access to food variety e.g. insects, vegetation.

Birds are often exposed to cold. In less well designed systems rain or damp can enter directly or on birds' feet. Shelters should be provided outside perches but wind can also enter and the house is generally colder than in CC or barn systems. Hens are susceptible to cold especially if plumage cover is low and body condition poor.

Maximum potential to move but not all birds access the range, and many birds do not range far from the house, depending on design features and steps taken to acclimatise birds.

Good ranging should increase bone strength and reduce risk of severe FP. Predation may cause some injuries. Risk of bone damage due to cellulitis in winter house warm.

More risk of disease, particularly parasites (protozoans, worms), and exposure to wild bird diseases. Hygiene less easy to control.

Non-organic birds very likely to be beak trimmed.

Natural light, and more ability to choose - can get away from noise or poor air quality.