

# LAYER HENS

INFORMATION NOTES



MARCH 2015

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Information supporting the *RSPCA Approved Farming Scheme Standards – Layer hens*

MARCH 2015



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# INFORMATION NOTES — LAYER HENS

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The RSPCA Approved Farming Scheme is part of the RSPCA's effort to improve the lives of Australia's farm animals. The RSPCA's animal welfare standards for layer hens provide the requirements for housing, handling, transport and slaughter that must be met under the Scheme. The RSPCA encourages producers to exceed the Standards as the opportunity arises and commit to a pathway of continuous improvement in the welfare of their layer hens. This section provides information about a range of aspects relating to the Standards and egg production generally.

## **Aggression**

Low levels of aggression may be exhibited when a pecking order is being established. But high levels of aggressive pecking (directed mainly at the head), fighting or chasing of other birds and loud vocalisation may increase the risk of injurious pecking in the flock. Aggression can be minimised by reducing competition for resources and providing more space and opportunities for victims to escape, including perches, access to a veranda or an outdoor area.

## **Beak trimming**

The most sensitive part of the birds' beak is the tip. The reliance on beak trimming as a routine method of managing feather pecking and cannibalism in layer hens is a concern and there is an urgent need to employ other management strategies to reduce the risk of injurious pecking. Some of these management strategies (see 'Feather pecking') are included in the layer hen standards. Where beak trimming occurs, it is the responsibility of the hatchery to ensure that the trimming equipment is calibrated to match the weight and size of the chick and is well maintained to ensure an accurate tipping of the beak only. Inaccurate and otherwise poor beak trimming should always be reported back to the hatchery.

## **Behaviour**

Abnormal behaviours or the absence of normal behaviours (behavioural restriction) could be indicative of a problem affecting bird welfare, including feather pecking, cannibalism, injury or disease. The birds' appearance, behaviour, the quality of the litter and the eggs themselves all provide indicators for monitoring bird health and welfare.

## **Biosecurity**

The key objectives of biosecurity and quarantine measures are to prevent or control the introduction and spread of disease to the flock whether they are housed indoors or have access to an outdoor area. See 'Disease' section for further information on biosecurity and vaccination protocols.

## **Closed Circuit Television (CCTV)**

The layer hen standards require that CCTV be used in those areas of the processing plant where the risk to animal welfare is greatest. CCTV should not replace the need to employ people with the right attitude towards animals, comprehensive staff training and good stockpersonship. CCTV, however, is an excellent means by which facility management and auditors can monitor compliance with standards and regulations relating to animal welfare. CCTV allows problem areas to be identified and promptly addressed.

## **Depopulation/euthanasia**

In commercial egg production systems, egg production declines at around 72 weeks (i.e. when the hen has been in the egg-laying facility for just over a year). It is at this stage, called 'end of lay' that most commercial egg producers will replace the existing flock with a new flock. This process is called 'depopulation' and requires birds to be manually caught and either placed in crates for transport to an abattoir or, alternatively, for these birds to be euthanased on farm. The on-farm euthanasia of a flock at end of lay requires competent operators trained in the technique regardless of the method used (usually cervical dislocation or CO<sub>2</sub>). Cervical dislocation uses a quick stretching motion that dislocates the neck vertebrae from the cranium and severs the spinal cord and carotid arteries. While carrying out the procedure, the bird must be held with both legs in one hand, the head in the other. Where birds are euthanased using CO<sub>2</sub>: the container must be fitted with a viewing window to allow bird behaviour to be observed; the container must be pre-filled with CO<sub>2</sub> to at least bird head height; birds must be placed, not thrown or dropped, into the container; birds in the container must be observed to be unconscious before adding CO<sub>2</sub> and placing more birds; no more birds must be placed in the container if the layer of CO<sub>2</sub> is not sufficient to fully cover the birds; and birds must be left in the container for at least two minutes after the last bird was placed before disconnecting the CO<sub>2</sub>. Any euthanasia procedure must also be followed by checks to ensure the bird is dead.

## **Disease**

Ongoing adherence to established biosecurity protocols both inside and outside the shed can help reduce the incidence of disease. Disease can be carried onto the farm by vehicles, equipment, supplies, visitors, farm workers, and animals, including wild birds, so access should be restricted. Inside the shed, removing sick or dead birds, controlling pests and flies, and ensuring farm workers wear clean clothes and boots and wash their hands when moving between different sheds, can go a long way to controlling disease. Birds that are well fed and managed and not stressed are likely to have a stronger immune system better able to resist disease than unthrifty birds. Preventative treatment such as vaccination should be implemented where available in addition to ongoing monitoring by farm workers who are able to recognise early signs of disease or parasite infestations (including worms and red mites).

## **Environmental enrichment**

Bird welfare is enhanced through the provision of pecking objects and other manipulable materials indoors and the provision of shade, shelter and palatable vegetation where birds have access to an outdoor area. The use of all forms of environmental enrichment that stimulate activity and help redirect pecking behaviour is strongly encouraged. Providing birds with pecking objects and other forms of environmental enrichment can promote foraging behaviour and encourages birds to peck at objects rather than at other birds. Rotating items and introducing novel items that are safe for use throughout the laying cycle can assist in maintaining interest in pecking objects. More popular items may need to be placed in larger numbers and also replaced more frequently. Items in which the birds have lost interest should be replaced. There should always be sufficient pecking objects of interest for the number of birds in the shed. Such items may include plastic bottles filled with coloured water, chains, fresh vegetables, pecking blocks, and hay nets containing cardboard, egg cartons, straw or hay/silage. Objects that reflect light onto the birds' plumage or into their eyes should be avoided as this may encourage pecking behaviour directed at the reflection rather than the object itself.

## **Feather cover**

Monitoring feather cover throughout the life of the flock can help identify the risk of injurious pecking. RSPCA Australia has adopted the AssureWel [feather cover scoring system](#) to assess feather

cover on the back/vent and the head/neck of the bird. The method requires visual assessment and scoring of a total of 50 birds (5 different birds in 10 different areas of the laying facility):

0 = no/minimal = no bare skin visible, no or slight wear, only single feathers lacking

1 = slight = moderate wear and damaged feathers or two or more adjacent feathers missing with an area of bare skin visible of < 5cm

2 = moderate/severe = bare skin visible of an area of 5cm or more

By entering these scores into the AssureWel [feather loss benchmarking tool](#), an assessment can be made of whether action is required to manage feather pecking or aggression. See: [www.assurewel.org/layinghens/featherloss](http://www.assurewel.org/layinghens/featherloss).

## Feather pecking

Feather pecking, vent pecking and cannibalism are serious welfare problems in layer hens, causing pain and discomfort and increasing the risk of mortality in the flock. Increased susceptibility to disease, decreased productivity and increased feed consumption are all direct results of the stress caused by injurious pecking. The primary trigger of feather pecking is a lack of opportunity to express normal foraging behaviour, with pecking being redirected at other birds. Injurious pecking can also result from stress caused by disease, by changes in the diet or other changes in the bird's environment, such as a change in the weather. The incidence of injurious pecking can be reduced by implementing a range of pro-active management strategies, including: matching conditions in rear to that in lay; encouraging ground pecking by scattering grain; providing immediate access to litter and maintaining litter quality; providing sufficient and even lighting; providing pecking objects; offering a diet in mash rather than pelleted form with adequate protein and fibre; maintaining a flock of even body weight; providing sufficient feeding space; minimising diet changes; controlling parasites; providing perches, nest boxes, a veranda; reducing stocking density and avoiding sudden changes in the birds' environment. Finally, good stockpersonship through, for example, calm and consistent bird handling, will also help reduce feather pecking (see 'Stockpersonship'). See [www.featherwel.org](http://www.featherwel.org) for more information on practical strategies to reduce feather pecking during rear and in the laying period. Where producers are successful in reducing feather pecking through implementing these management strategies, they are encouraged to source non-beak-trimmed birds.

## Feather pecking — pariahs or victimised birds

Observation of the flock can reveal the extent to which a small number of birds might be receiving repeated pecking from other birds. These victimised (or pariah) birds may be seen restricting their movement to dark, inaccessible parts of the shed. It may be necessary to remove these birds or provide other areas for them to escape pecking as these birds may be in poor health and may transmit disease to other birds.

## Feed and water

Diet influences the risk of feather pecking and birds with poor feather cover will eat more to keep warm. Strategies to reduce this risk include: ensuring adequate protein and fibre in the diet; managing and minimising diet changes carefully; achieving evenness in body weight across the flock; and providing mashed feed rather than pellets. The provision of insoluble grit at least once a week can help to stimulate gizzard development and aid digestion. Calcium carbonate grit may increase bone strength and reduce bone breakages. In short, changes to the bird's diet could be considered as a means to alleviate or prevent potential problems. Nipple drinkers as a primary water source rather than bell drinkers may reduce the risk of injurious pecking.

## Five Freedoms

The Five Freedoms were first mentioned in 1965 in a UK report on the *Welfare of Animals kept under Intensive Livestock Husbandry Systems* which stated that “farm animals should have freedom “to stand up, lie down, turn around, groom themselves and stretch their limbs”. Following the establishment of the UK Farm Animal Welfare Council shortly after, the concept was further refined into the Five Freedoms we know today: freedom from hunger and thirst; freedom from discomfort; freedom from pain, injury or disease; freedom to express normal behaviour; and freedom from fear and distress. The RSPCA considers that the welfare of an animal includes its physical and mental state. Good animal welfare implies both fitness and a sense of wellbeing. Criteria for assessing the welfare of laying hens against the Five Freedoms include:

- Freedom from hunger and thirst – ready access to feed and water to meet the needs of the bird
- Freedom from discomfort – shelter from the elements; thermal comfort; ventilation; lighting comfortable resting area; comfort behaviours (wing flapping, feather ruffling, scratching); litter condition; foot and skin health; plumage condition; increased space; pests, parasites and predators
- Freedom from pain, injury or disease – vaccinations; beak-trimming method and age; keel bone deformities; feather pecking; cannibalism; mortality; genetics/breeding for improved welfare
- Freedom to express normal behaviour – ability to nest, scratch, forage, perch, dust bathe, fully stretch wings; environmental enrichment
- Freedom from fear and distress – human-animal relationship; stockpersonship; aggression

## Flock size

As flock size increases, so can the incidence of cannibalism and feather pecking. By limiting flock size, the incidence of severe feather pecking and feather damage can be reduced. Flocks in larger sheds may be subdivided into smaller flocks by placing partitions inside the shed. As flock size increases, good access to feed and water and other facilities (including an outdoor area where available) remains important, particularly if birds are reluctant to move around because of the large number of unfamiliar hens. Where birds have access to an outdoor area, birds in large flocks may forage less in the outdoor area than medium or small-sized flocks. The percentage of birds accessing the outdoor area increases with smaller flock sizes and reduced stocking density in the shed. Good shed design with plenty of openings can be expected to minimise the impact of this social influence on the ability of hens to access the outdoor area.

## Floor eggs

Where birds lay eggs in the litter area rather than the nests, a number of strategies may help prevent or resolve problems with floor eggs, for example: providing a shallow amount of litter initially and then increasing its depth once birds have learnt to use the nest boxes; providing access to the litter area each day immediately after the daily egg-laying period only until birds have learnt to use the nest boxes; lifting birds onto the slats after lights out for the first week; turning the lights above the slats off last; avoiding dark areas or shadows on the floor; walking the shed frequently in the morning and placing hens that are laying outside the nest into the nest box; and, very frequent floor egg collection, particularly in the mornings. The practice of keeping birds off the litter or off the range for a number of weeks (rather than a few days) to facilitate training of birds to use the nests and thereby reduce the incidence of floor eggs is discouraged as this may result in feather pecking.

## **Handling and catching**

Handling and catching birds during depopulation is stressful to birds and every effort should be made to minimise discomfort. It is a legal requirement that birds are assessed to be fit for the intended journey prior to loading. If a bird is unable to walk, severely emaciated, visibly dehydrated, showing signs of injury or distress, blind in both eyes or suffering from a condition that is likely to worsen during the journey, it is not considered fit for the journey and must not be transported. When picking up birds, they should not be lifted solely by the head, neck, wings, feathers or tail feathers.

## **Inspections**

Birds and bird behaviour should be observed while birds are carrying out their daily routines, for example, egg laying, preening and feeding in the morning; dust bathing and feeding in the afternoon; and feeding, roosting and sleeping in the evening/night.

## **Lighting**

Provision of daylight during rear prevents eye abnormalities and can reduce the incidence of injurious pecking by encouraging foraging, exploration, and a range of social behaviours, particularly if birds will have access to natural daylight during lay. Lighting in nest boxes has been linked to vent pecking, feather pecking and plumage damage and, where considered necessary, should only be used for a short period when training birds to lay eggs in the nests. Consideration needs to be given as to how birds perceive light. The human eye is the most sensitive in the green spectrum and the least sensitive in the red and blue part of the spectrum. Poultry, however, are sensitive in the green, red and blue part of the spectrum and also perceive radiation in the UV spectrum. The different colours affect bird behaviour and where monochromatic lights are used (e.g. LED lights) their impact on bird behaviour (e.g. aggression, resting, feeding, walking, etc) needs to be considered.

### **Lighting — dawn/dusk period**

A gradual transition between light and dark periods can stimulate birds to feed and, particularly during a natural or simulated dusk period, allow them to find a suitable perch or resting place for the night and potentially increase the percentage of birds perching. A gradual transition between light and dark encourages natural settling behaviour with the period for most birds to settle to be between 30-60 minutes. A gradual transition between the dark and light period prevents birds crowding at drinkers and feeders. Birds may move abruptly when lights come on suddenly and more calmly during simulated dawn period suggesting birds are more comfortable with a period of simulated dawn/dusk. Birds may also need to be conditioned to a sudden blackout period during the light period (as a measure to prevent “hysteria” or pile ups).

## **Litter**

For foraging behaviour to develop properly in the absence of the mother hen, good quality litter can stimulate the chick to carry out this activity during rear. Provision of litter early on (from 1-4 weeks of age) in the rearing phase reduces injurious pecking at lay. The effect of providing litter during rear can last up to 45 weeks of age. A strong emphasis is placed in the layer hen standards on the need to maintain litter in a dry and friable condition to encourage foraging and dust bathing. Layer hens are strongly motivated to dust bathe, a behaviour that removes feather lipids and parasites and maintains plumage condition. Birds tend to perform dust bathing in groups and enough space should be available in the litter area to allow birds to do so. Litter must be of an appropriate material and of sufficient depth to allow birds to maintain body temperature, scratch, forage and dust bathe. Poor quality litter may cause these behaviours to be frustrated and result in foraging and ground

pecking behaviour redirected at other birds' feathers. Poor quality litter may also cause disease, bumblefoot and lead to lameness. Poor quality litter includes:

- Litter that is dry but a 'crust' has formed over dry/friable litter
- Litter that is damp and beginning to 'bind' on a surface layer
- Litter that is wet and a 'crust' has formed over wet litter
- Litter that is irreparable and fouled, emanating an 'off' odour, wet and/or crusted.

Managing shed conditions, especially ventilation, and ongoing maintenance of facilities (including drinker lines) combined with nutrition management and appropriate space allowance can affect litter quality. Every effort should be made to ensure shed managers are aware of and practice the principles of good litter management to avoid poor quality litter under varying ambient conditions.

### **Nest boxes**

Layer hens appear to prefer a smaller nest size over a group nest for laying eggs. There should be sufficient nest space to allow birds to express pre-laying behaviour and egg laying without being disturbed by other birds. Without a suitable nest site, birds may develop behavioural problems and increased aggression. Also, birds that retain eggs for prolonged periods due to insufficient or inadequate nest space, may lay eggs on the floor and/or with an extra layer of calcium on the shell resulting in downgrading of the egg. Lighting in nest boxes has been linked to vent pecking, feather pecking and plumage damage and, where considered necessary, should only be used for a short period in the morning when training birds to lay eggs in the nests. The practice of keeping birds off the litter or off the range for a number of weeks (rather than a few days) to facilitate training of birds to use the nests and thereby reduce the incidence of floor eggs is discouraged as this may result in feather pecking.

### **Outdoor area — access**

Providing birds in lay with early, if not immediate, access to the outdoor area can promote foraging behaviour and reduce the risk of feather pecking. Providing early access also allows greater use of the outdoor area throughout the laying cycle. If some birds lay eggs outside, then they can be trained to use the nest boxes by initially giving them access to the outdoor area outside of the laying period. Providing birds in rear with access to an outdoor area can increase use of the outdoor area during lay as well as reduce injurious pecking. Providing birds in rear with every opportunity to occupy themselves with scratching and foraging experiences, including in an outdoor area or veranda, can all contribute to reduced feather pecking in lay.

### **Outdoor area — attracting hens**

Good range use is indicated by the number of birds that have accessed the outdoor area on the day, the percentage of birds on the outdoor area at any one time, as well as the extent of the area that is being used. To encourage optimal usage, birds can be attracted to the outdoor area by ensuring it provides protection from aerial predators through a variety of natural and artificial shelter (including shelter belts), and by providing areas and objects of interest upon which birds can perch or in which they can forage or dust bathe. Non-flowering trees, shrubs, and shade/shelter corridors (including vertical structures, hedges and shrubs) starting close to the shed and gradually moving into the outdoor area can help birds overcome their fear of exposed areas where they may feel vulnerable to predation. Ensuring the outdoor area is attractive to birds can encourage its use.

## **Outdoor area — maintenance**

The outdoor area, including the provisions on it, needs to be maintained to ensure birds continue to use it and keep in good health. Good drainage, particularly around shed openings and along the length of the shed, can keep the outdoor area accessible while preventing moisture build up in the litter as birds return to the shed. Care should be taken to ensure that the type of drainage material used around shed openings does not discourage birds from accessing the outdoor area (e.g. by causing excessive glare during sunny days). Water, either on or near the outdoor area, may attract wild birds that may carry disease and should therefore be avoided. Allowing degraded areas to regenerate and using pasture rotation can assist with parasite control while ensuring the outdoor area remains attractive to birds. Gizzard and crop impaction is a concern when birds eat too much long grass as it can kill the bird. Keeping grass short can reduce the risk of impaction however other causal factors also need to be considered, e.g. disease, parasites, insufficient grit in the diet, and insufficient feed intake.

## **Outdoor area — openings**

Birds should be provided with easy access to the outdoor area through wide openings that are clearly visible from within the shed. Openings comprising the entire length of the shed provide the greatest opportunity for birds to access the outdoor area. Birds are reluctant to move past unfamiliar birds within the shed and around openings. Some birds may also perch at the openings, thereby blocking access to the outdoor area. There is a positive correlation between the width of the opening and number of birds in the outdoor area. By increasing the number and size of the openings, more birds will be able to access the outdoor area.

## **Perches**

A perch is a rod or similar structure raised above, rather than flush with, a floor area – litter, mesh, slats, or otherwise – that provides a suitable surface upon which the bird can rest, sit or roost without being in contact with the floor area. Provision of perches satisfies the layer hens' strong motivation to roost (perch above ground level) as a protection from predators. Perches should be provided in rear, so that birds can readily use them during lay. Provision of perches during rear may reduce the risk of injurious feather pecking and can result in greater bone mineral content in the tibia, sternum and humerus, as well as greater muscle deposition well into the end of lay. Access to perches can reduce fearfulness, cannibalism and aggression, and increase body condition. Perches can be provided as raised aerial perches and/or as perches incorporated onto raised floors. Raised floors on their own (e.g. wire mesh or slatted plastic) do not qualify as perching area. In some systems, a combination of raised aerial perches and perches incorporated onto raised floors may assist in meeting the perching requirements of the layer hen standards. However, there should always be some raised aerial perches to allow birds to escape from aggressive hens and satisfy their need to roost high off the ground (birds appear to have a preference for roosting on perches higher than 90cm). Perches help promote activity and bone strength (reducing the risk of osteoporosis) particularly if provided at an early age; however, they must be positioned at a height and at a horizontal distance to prevent injury (particularly keel bone fractures) and vent pecking. The perch should provide stability and support for the footpad as well as the keel bone, upon which the bird will put the most weight, and not result in the bird attempting to continuously balance itself to prevent from slipping or falling. Square perches with rounded edges and a soft surface may help reduce keel bone fractures and footpad problems (including hyperkeratosis). Consideration should be given to incorporating perches that not only provide for bird comfort but also protect them from red mites by preventing the red mites' access to the bird.

## **Rearing**

Birds should be reared in circumstances designed to develop natural behaviour for their adult life. A bird's use of resources is affected by both learning and memory. Birds should be reared in similar conditions to the laying facility to help them adjust easily to the laying environment. This includes matching, as much as possible, drinker, feeder and perch types, litter type and quality, slats and facilities on different levels, lights and feeder timing, and temperature before transfer. The layer hen standards have incorporated practical strategies to reduce feather pecking during rear as recommended by [www.featherwel.org](http://www.featherwel.org). By matching conditions between the rearing facility and the laying shed, the transition can be less stressful for birds thereby reducing the risk of feather pecking and cannibalism.

## **Shackling**

To reduce the pain and discomfort associated with the shackling of live birds at the abattoir, bird handling technique should be calm and gentle. Wing flapping on the shackles can be reduced by gently running the hands down the legs and body of the bird or keeping hold of the legs for half a second after shackling. Breast comforters prevent wing flapping and birds raising their head prior to entering the stunning bath. The shackle line, from point of shackling to the stunning bath, should be designed to minimise bends and be free of sharp corners. Conscious birds should not be hung on lines that run through tensioning mechanisms.

## **Shed conditions**

Bird welfare is influenced by facility and shed conditions, including temperature, humidity, ventilation, lighting and litter. Housing design should allow sufficient space for exercise, nesting, exploration and social behaviour, and minimise thermal discomfort.

## **Slaughter — controlled atmosphere systems**

Controlled atmosphere systems (CAS) where birds are rendered unconscious using a mixture of gases (mainly CO<sub>2</sub>) prior to being shackled have the benefit of reducing the stress associated with manual handling, avoiding the pain associated with shackling conscious birds and inconsistent voltage in the electrical water bath. Alternative (less aversive) gas mixtures to those being used currently may offer additional welfare benefits and are encouraged.

## **Sourcing of chicks for rearing**

Chicks should be sourced from hatcheries that operate in accordance with the animal welfare requirements in the *Model Code of Practice for the Welfare of Animals – Domestic Poultry* and the relevant breed standards. RSPCA Approved Farming Scheme Standards for pullets in rear are under development. In the future, pullets for an RSPCA Approved egg-laying facility must be sourced from rearing systems that have been assessed to be compliant with the standards for pullets in rear.

## **Stocking density**

Stocking density within the shed is calculated on the basis of the usable area available to the birds within the shed. Stocking density should be considered on the basis of bird condition, bird behaviour and overall shed conditions. Optimum stocking density indoors will depend on good management of shed conditions (temperature, humidity, ventilation, litter). More space may be required in areas subject to high temperatures and humidity unless appropriate temperature, humidity and ventilation

controls are in place and fully operational. Stocking density should be such that birds have sufficient space to perform comfort behaviours like dust bathing, wing flapping, preening and stretching.

### **Stockpersonship**

Bird welfare is influenced by management factors including bird handling and stockpersonship. Birds should be provided with an environment in which they have sufficient space to exercise, explore and express behavioural needs such as dust bathing, foraging, preening, wing flapping and wing stretching. Good stockpersonship avoids birds experiencing fear and distress – which is of key importance to help reduce feather pecking. Daily routines carried out in a calm and consistent manner can help accustom birds to normal activities and sounds within and around the shed. Notwithstanding, by sometimes wearing different coloured clothing, having different people inspect the birds, or varying the route walked through the shed, birds can gradually become used to unexpected changes in their environment.

### **Temperature, ventilation and air quality**

Shed temperature should provide a comfortable environment for birds at all stages of production and at all times of the year. Temperature extremes (heat or cold) require additional monitoring of the birds (e.g. for signs of panting or huddling) and ventilation may need to be adjusted to minimise any impact on birds. Adequate air exchange is essential for managing heat, moisture, dust and harmful gases, including ammonia. If ammonia can be smelled by humans (10-15ppm) or dust levels are such that the end of the shed is not clearly visible, corrective action, such as increasing ventilation, should be taken.

### **Transport**

Climatic conditions influence bird comfort during transport. Birds should be placed into modules and crates with sufficient space to allow for effective airflow throughout the journey. During hot weather, birds should be transported during the cooler parts of the day for the shortest possible time and avoiding any unnecessary stops of the vehicle. During cold or wet weather, wind chill is a particular risk and the vehicle should be covered (using covers that allow natural ventilation) across the top and, if necessary, along the sides of the vehicle to protect the birds.

### **Veranda**

A veranda (also known as ‘wintergarden’) is an addition to the shed which provides birds with an area to forage and dust bathe. A veranda protects birds from weather extremes while still allowing access to natural light and natural ventilation. A veranda reduces the risk of predation and disease from wild birds. A veranda may also include openings (offset from those in the shed) out onto an outdoor area thereby creating a transition zone between the shed and the outdoor area. Access to a veranda can encourage birds to be more active and may help reduce injurious pecking particularly if it provides areas of interest such as logs, pecking objects and other forms of enrichment.



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