

## Perch Designs for Extensive Systems

### SUMMARY

- **Perches are a requirement in extensive laying hen systems**
- **Careful consideration needs to be given to the design and construction of perches**

### Legislation

The legislation that requires the need for perches in all newly built or rebuilt non-cage systems from 01 January 2003 and all non-cage (alternative) systems from 01 January 2007 is the Welfare of Farmed Animals (Scotland) Amendment Regulations 2002 (SSI 2002 No. 334).

The regulations require that:

- birds in non-cage systems must be provided with a minimum of 15 cm/bird of perch space (18 cm/bird for organic standards)
- the perch should have no sharp edges or any other features which might injure the feet
- the perch must not be mounted above the litter
- there must be a minimum of 30 cm of horizontal space between perches and 20 cm between a perch and the wall.



Fig. 1: Wooden perch system (courtesy of Harold Richmond)

The Scottish Executive's view is that the Scottish courts would use a dictionary definition to define a perch, such as a pole, branch or other resting place above the ground on which a bird roosts. This means that slatted surfaces or rounded profile material such as plastic pipe or tubing or similar attached directly to the floor or slatted area is not considered sufficient to satisfy the perch requirements in Scotland.

### Why provide perches?

Perching is a behaviour that the bird performs naturally in the wild. At night, in particular hens that are not housed (such as feral poultry in Asia) will roost off the ground as a means of protecting themselves from predators. A branch or similar structure of a suitable dimension allows the bird to adopt a natural grip with its feet while sleeping.

The urge to perch has not been lost in domesticated poultry and in modern commercial egg laying systems, whether intensive or extensive, hens will perch if they are provided with a surface that they can grip on to. In poorly designed systems this urge to perch can lead to birds perching on unsuitable surfaces such as internal roof supports, wires and cables and this may cause the bird to injure itself.

Birds of various dominance rank (or 'peck order') may use perches at various times of day. During the light period, submissive birds can use the perch as a refuge from dominant birds. At night, in contrast, the dominant birds will occupy the higher perches.



Fig. 2: Metal H-frame perch system

While birds should not be at risk from predators at night in a commercial laying house, allowing the birds to perform this natural function is one way of reducing stress in the laying hen. The use of the perch during the day is perhaps more important because it has the potential to allow birds that are being aggressively or feather pecked to escape from their attackers. Consequently this can have a direct effect on reducing

the prevalence of injuries to the head and face (through aggressive pecking) or cannibalism (through severe feather pecking) and similar behaviours. It is important, however, to ensure that perches are spaced adequately apart, so that birds on lower perches cannot peck the belly or cloaca of birds above.

## Perch design and construction

(See Figures 1-4)

The modern hybrid laying hen is significantly heavier and has a relatively smaller wing surface area than its wild relatives, making the modern layer an awkward flier. This may account in part for the tendency of birds in extensive systems to damage their keel bone in particular, due to misjudged landings. To minimise the risk of birds injuring themselves on perches and to maximise the use of the perches a number of factors need to be taken into account.

### Perch shape and diameter

The recommended diameter for a perch is between 3 and 5 cm – a rounded profile with a flattened top appears to be most suitable. There must be no sharp edges. There needs to be sufficient space either side of the perch to allow hens to grip without there being a risk of the claw becoming trapped.

### Perch height

The recommended vertical height for the first perch is 45 – 60 cm from the surface to which it is secured. It is suggested that perches are spaced at least 30 cm apart from each other, in all directions, with the uppermost perch no higher than 1.0 m from the surface, where possible. If the perch is too low birds may not be raised up sufficiently from the floor or slatted area to remove them from flock (i.e. the perch should be positioned so as to minimise the opportunity for interaction (such as pecking) between birds on the perch and birds not on the perch).



Fig. 3: A-frame style perch, incorporating feed track (courtesy of Newquip/Big Dutchman)

If the perches are positioned at too great a vertical distance from each other, or too high from the floor surface, it is more likely that birds will misjudge their landing and collide with the perch/floor injuring their keel bone in particular. Also, because birds find it more difficult to land safely on perches when descending (as opposed to flying up to the perch) consideration needs to be given to providing safe and easy access down from higher perches. This is another reason for preventing birds from perching on unsuitably high structures which were not intended as perches.



Fig. 4: Metal X-frame perch system

## Perch material

Perches can be made from various materials and there is no conclusive evidence at the time of writing as to the best material to use from a welfare perspective. Wood, metal, and plastic can all be used to construct perches. There is some evidence that, when clean, PVC presents a slippery surface which birds may find more difficult to use (compared with wood, for example) however once contaminated with faeces there is no evidence that the material used to construct the perch influences a bird's behaviour. Ensuring that the perch is firmly fixed (and not allowed to sway) may be more important than the material itself. Whichever material is used, consideration needs to be given to the suitability of the material as a harbourage for parasites such as red mite or as a reservoir for bacteria or viruses. In essence the ideal perch would not provide any crevices or voids which red mite could access and it would be easily cleaned and disinfected at clean-out.

### Perch position

Birds will tend to defecate from the perches so positioning the perch over the slatted area or similar will help control the build-up faeces in the house. Perches must not be mounted above the litter area. For the same reason, where possible, the perches should not be placed in such a way that the birds could contaminate feed or water supply systems with their faeces. Similarly perches should not be positioned directly over one another if possible, to prevent birds from soiling one another. The angle between perches should be no more than 45 degrees, if possible.

To limit the risk of birds misjudging their landing and injuring themselves the higher perches should be positioned so that they can be reached either from lower perches or from other furniture such as nest boxes.

Perches, if poorly constructed can be barriers to movement around the house. Consideration needs to be given when installing perches not only to the requirements of the bird but also to those of the stockworkers and catching crew. In particular care should be taken that the perches do not pose a barrier to the nestboxes. This can be achieved by ensuring that the lowest perches are sufficiently high above the ground to allow birds to walk underneath them.

If perches can be readily removed from the house this should make the catching and cleaning processes in particular easier however this may not be feasible. If the perches are permanent fixtures care needs to be taken when designing and siting the perches to ensure that they do not pose a barrier that birds will collide with when being driven for the purposes of catching. The requirement for perches to be cleaned and disinfected between flocks means that particular consideration needs to be given also to the design and construction of fixed perches.

#### Sources of Information

SEERAD  
Pentland House  
47 Robb's Loan  
Edinburgh, EH14 1TY  
Tel 0131 556 8400

#### SAC

Avian Science Research Centre  
Auchincruive  
Ayr, KA6 5HW  
Tel 01292 525100  
SAC receives financial support  
from SEERAD

#### Contact point:

Nick Sparks. Avian Science Research Centre, SAC  
T: 01292 525105  
E: Nick.Sparks@sac.ac.uk  
W: www.sac.ac.uk