

Importance of a good house lay-out in a cage-free aviary system, now with build-through solution.

January 2024; By mimicking nature in an aviary system, birds can move easily through the complete system and can express their own natural behavior better. This increases animal welfare. They can scratch and dust bathe in the litter area, sleep in the system on perches, lay an egg in a safe and dark nest, and eat and drink in the system. If birds can explore their natural behavior, you minimize stress related behavior like feather pecking.

Choosing an aviary system: A first crucial set in running an efficient aviary production house is transferring birds that have been reared in an aviary system, so they know where to find food & drink, the nest, and the perches. That does mean that the layout of the production house needs to reflect a similar aviary system, fitting within the construction dimensions of the building (length, width, height) and the ventilation system. Aviary systems can have extra levels to house more birds.

Vencomatic Group can now also offer build-through solutions allowing you to install aviary systems in multi-story buildings. Vencomatic build-through solutions is calculated according to Euro norms, unique in the industry. It complies to European construction guidelines, ensuring a sturdy and safe solution. Limited number of uprights facilitate an open system, and in combination with the thin floor create an integral solution which allows for optimal ventilation at all bird levels. The openness of the system also makes working in the cage-free aviary house easy as both the birds and system are very accessible from all angles.

Aviaries designed with the bird in mind: All our cage-free aviary systems have their own specifications, but they all are designed with natural behavior of the layers in mind. In figure 1 you can see the typical daily schedule of a chicken. Hens will seek to find a place to perch and sleep higher up in a system. As soon as they wake up, they will look for feed, water and the nest. After eating, the birds will drink to help with their digestion. Hens will then move into the direction for their next activity of the day: laying an egg.

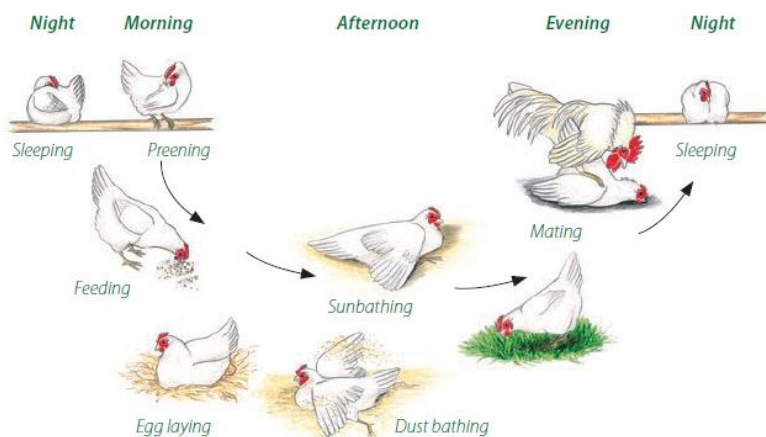


Figure 1. Daily routine of a chicken. Mating only applies for breeders and will not be referred to in this article. Source: Poultry Signals, Roodbont Publishers

Birds prefer a safe and dark place, their nest, to lay eggs (Stämpfli et al., 2012). After the laying period, there is some time for fun and relaxing. The hens jump out of the system, for instance to do

some dustbathing. During this period the birds will get hungry again, and it is time for another feeding round. When the day comes to an end, all birds will find their way again up towards a perch to sleep.

In a cage-free aviary system it is important that every hen finds her own position perch on, has the opportunity to find food and water as soon as she wakes up and can easily find her nest tin a calm and dark area. Regulations on minimum requirements differ per country and we keeps these requirements in mind when designing your aviary system. Adhering to the requirements is not only a legal matter but is very important for the birds' health and welfare. Sufficient space for eating, drinking, egg laying, dustbathing, and sleeping decreases stress and aggression in the house. Research shows that aggressive behavior and jostling (pushing against other hens) decreased with an increasing feeder space length (Sirovnik et al., 2018). Feeder space of 4 cm per hen as recommended in the USA resulted in twice the amount of aggressive interactions compared to 10 cm, which is the requirement in the European legislation. Similar results were found in a study comparing nest space per hen, where 70 cm² of nest space per bird led to two times more pecks and threats compared to 100 cm² of nest space per bird (Hunniford et al., 2014). The uniformity of the flock is also dependent on feeder and drinker space, so that all birds have equal access and can grow at the same rate (Carmichael et al., 1999). Figure 2 shows that the position of all features in the aviary are at the correct place to facilitate the movement of the birds from sleeping, to eating, to drinking and to lay an egg in the nest.

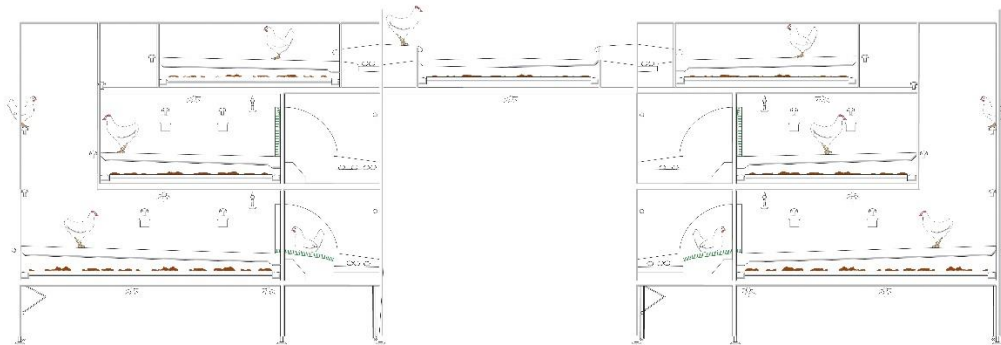


Figure 2: Bolegg Gallery 3 Tier

More important lay-out considerations: the ventilation system shouldn't create any draughts near the nests. In an experiment comparing nests with and without airflow inside the nest, hens were found to avoid the nest with an airflow (van den Oever et al., 2020). This is potentially more important in colder climates because an airflow of a low temperature is less comfortable than an airflow of a higher temperature. With the manure belts and the aeration tubes in the aviary, we make sure that the system stays clean and the environment in the house is as optimal as possible.

Lighting in your house can make or break your results. It concerns both natural light from outside coming into the house, and how the lights inside the house and inside the aviary system are positioned. The lights should be positioned in a way that there are no dark corners as this will become an attractive area for hens to lay their eggs. If the lights are positioned correctly, you still should manage the light correctly both the light intensity and the order in which the lights are switched on and off as both can have a massive impact on bird behavior and performance. When it is not correct, this can lead to problems such as feather pecking and large amount of floor and system eggs.

Curious to find out how Vencomatic Group can help to transition you from (enriched) cages into a cage-free Aviary system, come and meet the team during one of the IPPE show days at booth **B23005**.

You can also download our [free Ebook](#) to learn transitioning into a cage-free poultry house.

Company Profile

At Vencomatic Group, we are on a mission to make poultry husbandry sustainable. We seek to balance the operation of a successful business with the lowest possible environmental impact, all while trying to achieve the highest animal welfare levels. **We always, develop our products based on a thorough understanding of the bird, her well-being, and her eggs.**

Our unique solutions are supporting the entire 'Egg Way' for layers, breeders, broilers, and hatcheries. Think of poultry housing equipment ([Vencomatic](#), [Van Gent](#)), egg collection and handling equipment ([Prinzen](#)), and climate solutions ([Agro Supply](#)). And we don't stop there, discover how [Megg-sius](#) powers precision farming and gives us the opportunity to help our customers even further, reaching the maximum potential out of every bird, every flock every farm.

For more information please visit: www.vencomaticgroup.com

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