

VERANDAS (WINTERGARDENS) FOR LAYING HENS

WHAT IS A VERANDA?

A veranda, also known as a wintergarden or covered run, is defined by EFSA¹ as “an additional, roofed, uninsulated, outdoor addition to a building, with an outdoor climate”. Popholes, along the wall of the barn, allow birds access to the veranda from the shed. Verandas have a solid roof which offers the hens protection from precipitation and predators², while at least the outermost wall of the veranda is composed of mesh/netting which allows the birds to experience an outdoor climate and natural light. Verandas can be added to existing barn systems to provide additional space and enrichment opportunities, but are also a beneficial addition to systems with outdoor access - a veranda offers a gradual transition between the indoor and outdoor environment, and provides additional space and an outdoor climate even when access to the range is restricted due to inclement weather or when compulsory housing orders are in place during disease outbreaks such as HPAI. In the 2023 report on the Welfare of Laying hens on Farm¹, **EFSA recommend that a covered veranda should always be available** for laying hens in all cage-free production systems.



BENEFITS OF VERANDAS FOR LAYING HENS

A well-designed veranda has multiple advantages for both the hen and the producer.

- ✓ **Facilitates poultry vision:** Vision is a laying hen’s primary sense. Natural light contains the full spectrum of light which is necessary for poultry vision, allowing them to find food and water more easily.
- ✓ **Improved skeletal health:** Natural light increases activity and vitamin D synthesis both of which contribute to better bone health in laying hens.
- ✓ **Reduced ammonia build-up:** Ammonia build-up is one of the main environmental hazards laying hen sheds. It can lead to respiratory problems in then hens, negatively impacting egg production and quality. Verandas improve litter quality and air flow in the barn and offer the birds access to fresh air³.

- ✓ **More space:** A veranda offers more space for the hens and results in a reduced stocking density within the barn when the popholes are open.
- ✓ **Choice in environmental conditions:** Verandas give hens the choice between environmental conditions (light, temperature, air quality).
- ✓ **Behavioural opportunities:** Well-furnished verandas offer the birds more opportunities to engage in a diverse range of highly motivated behaviours such as foraging and dustbathing.
- ✓ **Reduced Feather Pecking:** Studies in commercial flocks found that the presence of a veranda is associated with better feather cover in laying hens^{4,5}. A veranda reduces the stocking density in the barn, provides additional foraging and pecking opportunities, helps maintain litter and air quality, as well as giving hens a place to escape/withdraw from unwanted contact – all good strategies to reduce the risk of feather pecking⁶.
- ✓ **Operate without beak trimming:** The multiple benefits provided by a well-designed veranda, including better air quality, reduced stocking density, and more behavioural opportunities are key practices recommended for ending the practice of beak trimming¹.

Additional benefits for Free-Range & Organic Systems

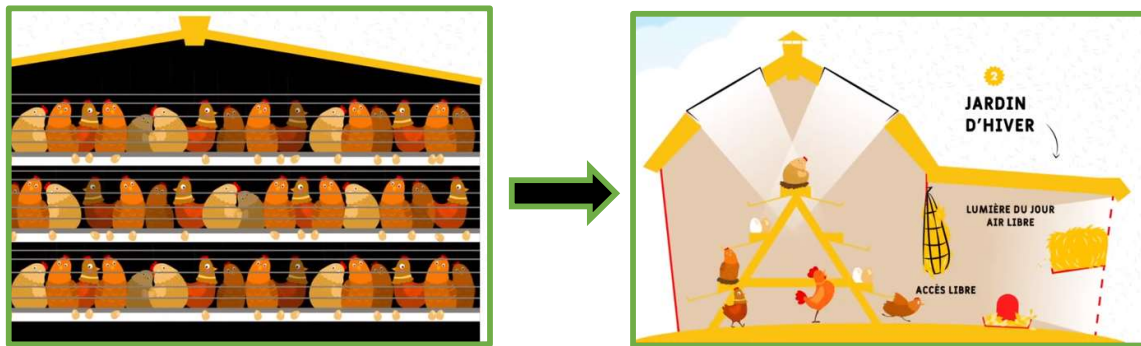
- ✓ **Promote range use:** Verandas in systems with outdoor access offer a more gradual dark to light transition, encouraging the hens to move onto the range.
- ✓ **Outdoor environment when range access is unavailable:** Sudden changes in housing conditions can be stressful for hens. Providing a veranda for free-range and organic systems can reduce the behavioural problems that arise when range access is restricted due to weather conditions or the risk of infection from wild birds.
- ✓ **Lower Mortality:** High use of the veranda is associated with lower mortality rates in organic laying hens indicating that a well-designed veranda is key to getting the most benefit out of the system³.

MOVING FROM CAGES TO HIGHER WELFARE BARN SYSTEMS: COCOTINE'S LAYING HENS IN FRANCE



COCOTINE'S COMMITMENT TO IMPROVE LAYING HEN WELFARE

Cocotine is a brand of the Eureden Group, specialising in egg products for food service companies and therefore must deal with strong budgetary constraints and find the best balance between economy, quality, and animal welfare. Despite these constraints, Cocotine has chosen to go beyond regulatory requirements for their egg products from barn system, as well as producing eggs to free range and organic standards. Cocotine has been committed to the cage-free transition since 2017 (with a 2025 deadline), and the first range of higher welfare barn products was launched commercially in early 2020 under the name "Code 2 Mieux-Être Animal" ("Code 2 Improved Animal Welfare"). Farms under the "Code 2 MEA" initiative are required to provide their animals with natural light, access to a veranda, and extra enrichment, as well as to phase out the practice of beak trimming.



XAVIER LE COCQ – MOVING FROM CAGES TO A HIGHER WELFARE BARN SYSTEM

One producer who took up this challenge was Xavier Le Cocq, who had produced with a cage system for 25 years. Work began at the end of December 2019 and within 4 months, his former cage system was ready to receive the first batch of laying hens for Cocotine's "Code 2 MEA". The barn of 25,500 hens, is divided into five sections, each colony containing between 5-6000 hens with modular partitions, as well as an infirmary. Each section has an aviary consisting of three rows of tiers with 1.55 m between each row (manufacturer: Jansen), and the stocking density within the barn is 9 hens/m² of usable surface. Natural light is provided in the barn via windows (equivalent to 3% of the floor area), and sharp contrasts in lighting are reduced by adding canvases and windbreak nets on the inside of the windows. This prevents the birds from crowding under light spots which could potentially lead to piling and suffocation. Within the aviary, ramps are provided between the tiers to facilitate free movement within the system and reduce the risk of falls and collisions which could lead to bone fractures.

VERANDA DESIGN FOR GOOD LAYING HEN WELFARE

An 8.5 m wide veranda, divided into five sections, was built along the entire length of one side of the barn, adding 50% more surface area for animals. The veranda has a solid heat-insulated roof and solid side walls to protect the hens from both from poor weather conditions (both heat and cold/wet conditions) and contact with wild animals, protecting the hens from infectious diseases such as Avian Influenza. The outermost wall of the veranda is constructed of an open mesh material to allow natural light and fresh air into the veranda. Additional skylights in the ceiling provide even more natural light in the veranda. Once the hens are reliably using the nest boxes for egg-laying (around 25 weeks), access to the veranda is opened and the hatches remain open 24 hours a day for the remainder of the laying cycle. The litter in the veranda enables dust bathing by the hens – it is composed of crushed shells and accumulated droppings, cleaned twice per production cycle. Enrichment provided in the veranda makes the space even more attractive for the birds and enables them to express their natural pecking, scratching and foraging behaviours – oats are scattered on the floor daily (10 kg/section/day) encouraging scratching and foraging, while pecking is stimulated by plastic cannisters and flax fibre nets suspended from the ceiling and plastic cylinders on the floor. The open hatches and concrete pillars of the barn itself serve as elevated areas for perching.



MANAGEMENT

Overall, the organisation of work has not changed with this new system, the animals can be easily monitored both inside the barn and in the veranda. In terms of the environment within the barn, while Xavier Le Cocq notes that while *“the atmosphere is a little dustier than before, the static ventilation is manages well with this”* so this slight increase is not concerning for the birds or for the farmer.

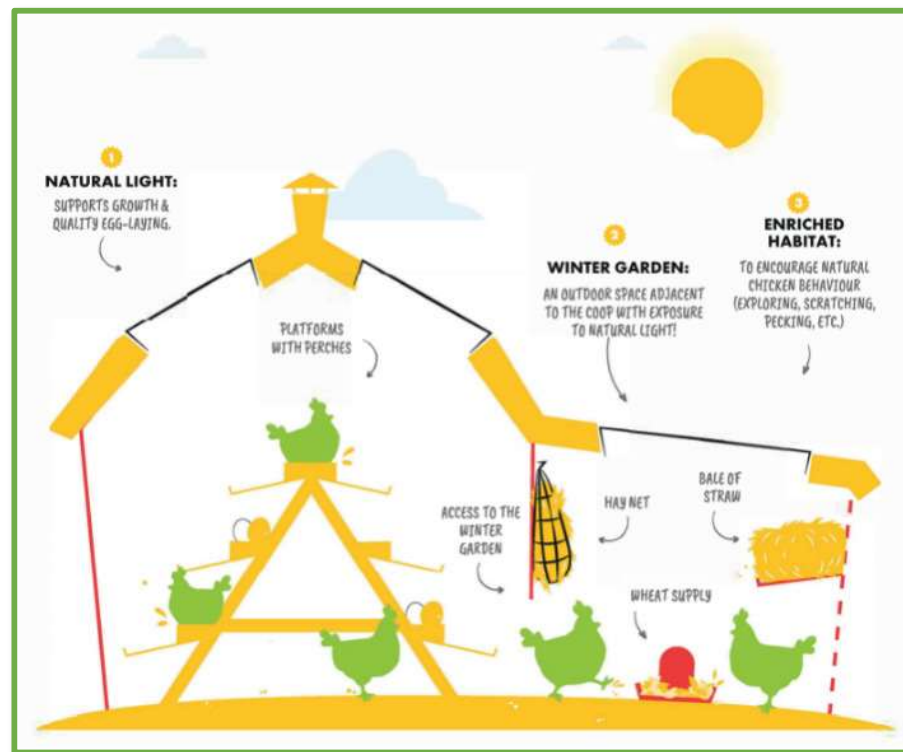
COSTS OF TRANSITIONING FROM CAGES TO A HIGHER WELFARE BARN SYSTEM

On average, the estimated cost of transitioning from a converted cage building to an aviary system with a veranda was €18-20/hen. By carrying out a large part of the project himself, Xavier Le Cocq was able to reduce this cost to €14/hen (i.e. a saving of around €60,000).

Xavier Le Cocq believes that this transformation from caged system to an aviary system with veranda is a commitment to the future to ensure the sustainability of the model: "This project allows us to avoid repeating the same mistakes, as for the renovation of the cages in 2012, with a system that would be questioned in the years to come".

[Discover Xavier Le Cocq's testimonial in video.](#)

Since the transformation of his building with the installation of the veranda, Xavier Le Cocq has led multiple cycles and the breeder is rather satisfied with this transition: "The aviary building with the veranda is a good compromise between the respect of animal welfare and the biosecurity of the farm".



ADDING A VERANDA TO IMPROVE THE WELFARE OF LAYING HENS – BUONOVO AND THE ITALIAN PERSPECTIVE



LIDL & EUROVO: PARTNERSHIP TO IMPROVE LAYING HEN WELFARE

Lidl is one of the main retailers operating in the Italian market and has always put laying hen welfare at the centre of their animal welfare commitment. In 2018, Lidl Italy has been the first Italian retailer to extend their 2025 cage-free commitment to own-label egg ingredients, thus stimulating a ripple effect in the market. Driven primarily by increasing consumer demand, as part of their commitment to higher welfare standards for laying hens, Lidl has started to work in collaboration with their supplier Eurovo to develop a new range of barn eggs – called BuonoVO ('good egg' in Italian) – where the animals can experience a better life compared to standard barn systems.

BUONOVO – THE GOOD EGG

BuonoVO eggs come from hens kept in aviaries where additional space has been provided to the hens by two means. Firstly, a veranda has been added on one side of the shed and secondly, the number of hens inside the shed has been reduced. This has led to a significant decrease in stocking density (on average 6.5 birds/m² of usable space within the barn) compared to what is allowed under EU legislation (9 birds/m²). Over two months in early 2019, Eurovo renovated an entire farm consisting of five sheds and by April 2019 they were able to begin their first production cycle of BuonoVO eggs. Each of the barns can house between 18,500 – 24,000 hens in a stepped multi-tier system, divided into colonies with up to 6000 birds each.

VERANDA DESIGN FOR GOOD LAYING HEN WELFARE

Verandas, measuring 3.5 m in width, were added along one side of each barn, providing 12-13% additional usable space for the hens. The verandas, like the barn, are divided into sections, with six popholes per section to give the birds easy access to the veranda and allow natural light into the barn.



The verandas allow plenty of fresh air and natural light through their loose mesh walls, while the covered roof offers protection from bad weather and reduces direct sunlight while also reducing the risks of contact with wild animals. Chopped straw on the floor, topped up every few weeks, and

concrete blocks encourage foraging and pecking behaviour, while boxes containing ground seashells allow the hens to dustbathe and provide an additional source of calcium. The veranda is made even more appealing by the addition of branches for perching, and drinkers are present to encourage the hens to explore. Hens are given access to the veranda three weeks after arrival in the barn, and the hatches are open daily from dawn until 10:30pm.

According to the breeder, while the verandas add some additional labour requirements and have an impact on the ventilation system, the lower density in the barn makes it easier to inspect the animals and train new staff, while also providing a healthier environment for both the staff and the animals. By reducing stocking density, giving the hens a choice over the environment, and more enrichment the farm can operate without problems of feather pecking negating any need to beak trim the hens.

COSTS OF ADDING A VERANDA TO AN EXISTING BARN SYSTEM

On average, the cost of adding the verandas to the barns worked out at only €3.81 per hen (about €395,000 in total for the farm). For the customer, this transition has resulted in about a 20% increase in the price per egg. LIDL have noticed increasing consumer demand for improved welfare conditions of laying hens. Since the addition of the veranda, over four cycles have been carried out in this new system so far, and it appears to have been a good and profitable investment for the hens, the producer, the retailer, and the consumers.



KEY MESSAGES

The addition of a veranda has advantages for both barn systems as well as outdoor systems. Provision of an outdoor climate, natural light, additional space and enrichment benefits hen health by improving the conditions within the barn and hen welfare by reducing the risk of feather pecking and increasing opportunities for performing highly motivated behaviours. In systems with outdoor access, verandas encourage range use, as well as providing additional space with an outdoor climate when the range is inaccessible, particularly important when risk of disease (e.g. HPAI) is high. The case studies of Cocotine and Eurovo demonstrate that cage systems can be successfully transitioned to higher welfare barn systems and that verandas can be added to existing barn structures in a short period of time, with huge benefits for laying hen welfare.

CIWF RECOMMENDATIONS FOR A SUCCESSFUL VERANDA

Compassion highly recommends producers and companies invest in verandas for laying hens in both barn and free-range systems.

- ✓ **Access:** Birds should have continuous access to a veranda during the light period from the first day on the laying farm. The veranda should be built along at least one long side of the shed and separated from the shed by a solid wall. Access to the veranda should be provided via popholes distributed along the length of the shed. Popholes should be at least 1m long and 40 cm high, with at least 2 m of openings per 1,000 hens.
- ✓ **Space:** The stocking density should be calculated on the basis of the indoor floor area only, excluding the veranda. This prevents stocking density being exceeded when birds cannot access to the veranda. The veranda should add at least 20% additional floor space¹ and should be wide enough to allow machinery to pass through for cleaning (at least 3 m wide²). A minimum height of 2m is recommended to ensure farm staff can pass through easily to check the animals.
- ✓ **Litter:** The floor of the veranda should be well drained, and covered in comfortable, clean, dry, and friable organic litter. The condition of this litter should be well maintained throughout the laying cycle.
- ✓ **Light:** At least the outermost (long) side of the veranda should be made of mesh/netting, at least 70% daylight and air permeable, to ensure sufficient light and fresh air enters the veranda and provides a contrast to the environment inside the barn.
- ✓ **Enrichment:** Verandas should be well-furnished to increase their appeal and promote use of the space. Enrichment materials including perches, pecking substrates, and additional facilities for dustbathing, such as containers with loose litter should be provided in sufficient quantities in the veranda. Tree branches and haybales can also be provided and additional feed, water, and supplements such as grit or oyster shells can also be offered.
- ✓ **Comfort & safety:** It is important to manage light intensity, temperature, and wind flow in the veranda. This can be done by using curtains/windbreaks to manage the light intensity as well as control temperature and provide protection from strong winds. Building the roof with an overhang is a simple way of ensuring shade around the veranda. The roof should be solid and waterproof to prevent wild birds fouling the veranda and to keep it dry. The area around the veranda should be managed to ensure it does not flood during wet weather.
- ✓ **Biosecurity:** The veranda should minimise the risk of contact with wild animals and wind-borne pathogens through use of a solid roof and windbreak features.
- ✓ **Pullets:** It is a good idea to provide veranda access for pullets by 8-10 weeks of age depending on the local conditions to help them acclimatise to natural light and to an outdoor climate.
- ✓ **Welfare Outcome Measures:** Monitor key animal welfare indicators and hens' usage of the veranda to ensure continuous improvement of the system.

REFERENCES

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