

Identifying the true cost of pullet rearing systems

Today's producers have a few options when planning a pullet rearing system for commercial cage-free egg production. From floor rearing to aviary rearing, each type of system comes with a different price tag. What is not as easy to see, however, is the true cost of each system after figuring in labour needs, bird mortality rates and other factors.

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Consequently, it is critical for producers to look at all aspects of the operation to calculate long-term return on investment, instead of simply flocking to the solution that is cheapest to install.

Floor rearing systems

The first and least expensive housing option for pullet rearing we will review here is the floor rearing system. It is especially attractive to producers who have old barns with some equipment already installed, making the cost even cheaper.

Unfortunately, floor rearing systems are not ideal for training birds to succeed in a cage-free laying facility, as they lack many of the features found in laying facilities.

Although some floor rearing systems contain perches, the number of perches is usually inadequate for the birds to fully learn how to use them.

Additionally, floor systems typically do not have slatted areas, so the birds never become comfortable walking on slatted floors. If bell drinkers are used in the barn, the pullets likely will not accept nipple drinkers when transitioning to a laying system.

These issues highlight the importance of proper pullet training. Additionally, the hidden costs of floor rearing systems continue to add up throughout the lifespan of a flock as poorly trained birds will not perform well in a laying house.

Instead of moving around the house exhibiting natural behaviours, birds will often resort to stressful behaviours, such as

feather pecking or bunching up in the house, causing management problems. The typical result is a low percentage of grade-A eggs, high labour costs and a poor return on investment.

Floor rearing systems with platforms

Another pullet rearing option is a floor system with perches and adjustable platforms. In this system a nipple line is located above the platform, requiring birds to jump, which is a huge improvement over standard floor rearing systems when it comes to pullet training.

These types of systems offer a mid-ranged cost of installation. Although the extra investment results in better bird training, producers who have them also pay high labour costs.

Vaccinations, for example, can be difficult to perform when dealing with the very large flocks in these rearing systems. Not only is it difficult for many producers to fill the job openings to perform the required labour, the added costs greatly erode return on investment potential.

Another big disadvantage of floor systems with platforms is higher bird mortality rates. For example, producers may bring in 105,000 pullets, fully expecting to lose 5,000 of them in order to achieve a laying flock of 100,000 birds.

A leading cause of bird mortality with these systems is poor environment, and one of the main reasons for this is that the vast

majority are installed without manure belts. Not only do manure belts reduce the amount of labour needed to remove the litter, they also greatly improve the environment, leading to healthier and better performing birds.

Aviary rearing systems

A third option for pullet rearing is the aviary rearing system. In these systems, pullets can be closed in for the first few weeks, providing them with a safe, comfortable and well-ventilated environment in which they have ample space to move and jump around. These systems include a lot of perches as well as adjustable platforms with nipple drinkers above them for bird training.

While such systems are more expensive than floor rearing systems with platforms, the key advantage is the compartmentalised design of aviaries, making access to birds much easier and significantly lowering labour requirements.

Aisles alongside the compartments make catching birds for vaccination and other tasks much easier. Producers may even keep multiple flocks separated in one house, which is not possible with other systems.

The Chore-Time Volution System is one example of this type of system. This two-tier system includes extendable perches, helping birds access the upper tier.

Additionally, adjustable-height platforms and drinking lines inside the system are gradually raised as the pullets grow,

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encouraging the muscle development needed to best perform in the future laying facility.

Double sliding doors provide secure containment of the pullets during the start-up phase. The doors also allow workers to easily reach birds for vaccination, helping to keep labour requirements to a minimum.

The environment is also one in which birds can thrive. It is well ventilated with slatted floors and is well equipped with manure belts to keep the system clean and the birds healthy.

Bird density

One of the best apples-with-apples comparisons of the three systems is bird density. With a floor rearing system, producers can stock about 1.85 birds per ft² (6.07 birds per m²) of barn.

Floor rearing systems with platforms can be stocked with about 2.32 birds per ft² (7.61 birds per m²).

Aviaries can hold up to 3.72 birds per ft² (12.20 birds per m²) of barn. With this in mind, producers can double the number of birds in the same facility with an aviary rearing system versus a floor system.

Considering the huge expense of the barn space alone, it is logical to use that barn to house as many pullets as possible to help maximise the return.

Further efficiency is gained through the fact that some equipment costs, such as ventilation, are the same for both aviary rearing systems and floor systems, spreading that cost out over more birds with an aviary rearing system.

Despite the higher stocking densities of aviary rearing systems, they are capable of turning out birds with a very high uniformity percentage. The uniformity of birds reared in

	Floor rearing system	Floor rearing with platforms	Aviary rearing system
Advantages	Lowest equipment cost	Mid-range equipment cost	Lower labour costs: Good bird training
Disadvantages	Poor bird training: Worst stocking density	High labour costs: Higher mortality	More expensive
Birds per ft ²	1.85	2.32	3.72
Birds per m ²	6.07	7.61	12.20

Table 1. Comparison of different rearing systems.

aviary systems translates into healthier birds and more grade-A eggs when they are moved into laying facilities.

Long-term return on investment

In the end, what matters most is the long-term return on investment of each system. When considering the reduced labour needs, reduced mortality and higher quality birds produced in an aviary rearing system, producers have the opportunity to achieve greater profits with aviaries over a long-term period.

Those who wish to save money up front on floor systems – with or without

platforms – may regret the decision after seeing returns diminished by lower bird densities, higher labour costs and overall poorly performing birds.

When building poultry housing for commercial cage-free egg production, virtually no producer enters into it planning for the business to last only a short time. In fact, many hope their operations will succeed for generations.

Unfortunately, it is not easy for producers to look beyond the initial installation costs of aviary rearing systems. However, these systems must be considered from a long-term investment perspective. Investing in the right system may just be the key to the long-term success of the farm. ■