



FINE TUNING DIETS TO ALTER EGG SIZE

Expert advice on influencing egg size through feed and nutrition

If you need to adjust the average egg size that your flock is currently laying, then changing the birds' diet will probably be the last thing you do.

The key influencers of egg size are a sequenced relationship of firstly the breed potential followed by the lighting programme, both during the rearing period and when coming into lay – when the influence of feed can have impact.

The fine tuning of your flock's diet may be all that is required to adjust the average egg size into the category needed to improve your business' viability.

A CHOICE OF FEEDS

If you need to increase your average egg size and your flock is already in lay, then you are left with the last tool in the box: nutrition. But you need to use a fine adjust screwdriver, not a hammer.

Some feed suppliers offer a limited range of diets as the bird progresses through its productive life, but some, such as Humphrey Feeds & Pullets, with over 50 years of

experience milling its own feeds, offers around 300.

Sales director Martin Humphrey explains: "Within each range of diets will be nearly 40 variations, based on a few key diets, each of which have slightly different nutritional objectives. Modern hybrid birds are such finely tuned high performance athletes, so you have to be careful to avoid tripping them up by changing their diets too radically. Instead, we give farmers the means to support their layers from our extensive range of diets which provide gradual and frequent changes in the feed."

Individual flocks can have differing nutritional needs depending on their environment and circumstances.

Humphrey Feeds & Pullets has a network of poultry experts who visit flocks on their farms and advise customers on the optimal feed type to utilise, as well as other aspects of bird management such as egg quality, flock health and longevity.

Humphrey says: "Previously, customers often wanted to control (push down) average

egg weights. So we offered a 'Small Egg Size' variations of the standard feeds. More recently, consumer demand has pushed for more large eggs, so now we offer 'Large Egg Size' diets."

WELFARE MATTERS

"This is still relatively new territory. We're proceeding very cautiously to see how we can best encourage and support hens to produce larger eggs, whilst maintaining bird health and welfare," Humphrey adds.

Producing too many eggs which are too large can cause stress, leading to feather loss and problems with thermo-regulation. When the outside temperature drops, the birds will eat more, compounding the problem of larger eggs.

TRADITION VS A NEW APPROACH

As birds age, egg production naturally dips while egg size increases. There are therefore advantages to altering feed to control egg size, while supporting bird welfare and shell quality.

Conventional thinking has been to reduce energy and nutrient content after birds reach their optimum weight and production has started to decrease. However, over the last 10 years the iso-kinetic range of diets has gained in popularity: the energy content is maintained, while most other nutrient levels are reduced.

Birds generally eat to their energy needs and a low energy diet encourages overfeeding. Whereas energy intake has little effect on egg size, decreasing the nutritional density of the diet can limit further increases in egg size.

GENTLY DOES IT

Whichever way the average size needs to go, gradual change is best.

Egg producers should ensure that their feed supplier can deliver a finely tuned range of feeds in order to make slight but effective tweaks rather than radical leaps, which can shock the finely tuned athlete that is a modern hybrid laying bird.

WHICH INGREDIENTS AFFECT EGG SIZE?

The bulk of feed consists of grain and proteins, along with oils and minerals to keep the bird healthy and nourished.

While the overall composition of diet influences egg size, the nutrients which most affect it are:

Protein: Comprised of amino acids, of which methionine has the most significant effect on egg size and mass.

Oils: Oils are bound up within certain materials, or are added on top. Oils have a range of complex fatty acid chains and selecting the right oil for the right fatty acid can influence egg size. A significant fatty acid is Linoleic acid.

Linoleic acid: The use of higher levels can have a positive effect on egg weight.

Calcium: While it does not necessarily affect egg size, it is important to support larger egg sizes with sufficient calcium in the feed.