The importance of bodyweight management in the layer flock

Bodyweight management in your layer flock is one of the most important parameters to track in farms. From my experience, I find that producers often follow growth during rearing, but they will discontinue once the birds start laying.

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Keeping an eye on bodyweight is important in each stage for different reasons: in rearing, on target bodyweight has a positive correlation with better performance during the production period, and regular control in production gives producers an indication of whether the farm environment will allow for the best productivity from the birds.

Why is it important to check bodyweights?

A weekly bodyweight control is necessary to check the real evolution of the flock: the sooner we detect deviations, the quicker adjustments can be implemented.

Additionally, feeding techniques, such as using empty feeders once a day, can only be correctly implemented when we know bodyweight evolution.

The minimum frequency to check bodyweight:

- Weekly from day old to 3-4 weeks: bodyweight calculation based on group control. Chicks are weighed by group.
- Weekly from 3-26 weeks of age.
- Every two weeks between 26 and 35 weeks of age.
- Every four weeks after 35 weeks of age.

As shown in Table 1, bodyweight management and uniformity can also influence a number of important benchmarks.

What can be surprising for many egg producers is that growth is not linear for your birds. Growth will be at its highest between 6 and 11 weeks, taper off until about 16 weeks and then increase again. This is when the medullary bone is being formed, which is important for strong egg shell quality.

Rearing – investment in your flock

During the rearing period, it is important to aim for the best possible bodyweight at 4-5 weeks old. At the end of rearing, good uniformity is crucial to ensure that the majority of birds are receiving the right management decisions including their feeding program.

Uniformity is dependent on:

- Feeding drinker space/bird.
- Complete access to the equipment, in particular in aviary systems
- Feeding times/selection: fewer feedings = bigger meals = less selection.
- Meal length.
- Feeding time adaptation: train the birds in rearing for feeding techniques that will alter in the production period (from five weeks of age).

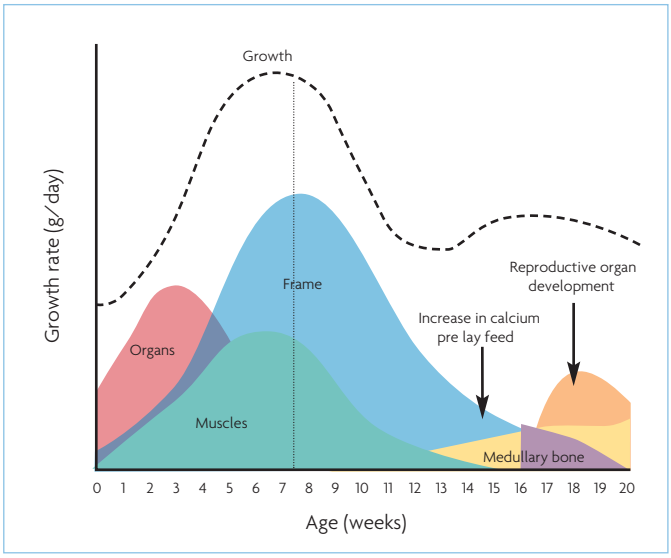

Fig. 1. Key anatomical and developmental stages of pullets.

Table 1. Influence of pullet quality on laying performance.

	Bodyweight at 5 weeks old	Bodyweight at 10 weeks old	Uniformity at 16 weeks old
Sexual maturity (%) production between 20-24 weeks	+++	+++	
	0.63	0.59	0
Sexual maturity (%) production between 68-72 weeks	+++		++
	0.82	0	0.46
Egg number at 60 weeks old	+++	++	+++
	0.83	0.30	0.54
Egg number at 72 weeks old	+++		+++
	0.93	0	0.72
Liveability at 72 weeks old	+++		++
	0.71	0	0.40

+++: very good correlation, ++: good correlation, +: low correlation, 0: no correlation

Sexual maturity and bodyweight

Finally, when your pullets enter sexual maturity, their bodyweight will determine the average egg weight. Sexual maturity management is also a key factor for controlling bodyweight at the beginning of lay.

As an example, for brown birds, many trials showed a bodyweight modification of 80g at sexual maturity induces an egg weight variation of 1g.

At this stage bodyweight can be influenced by modifying the flock's feed and feeding program, especially by focusing on the energy level of the feed. Lighting is another factor that can influence appetite and feeding in your birds. Increasing the amount of light during the rearing period can encourage feed intake and growth.

Summary and conclusions

- A lack of bodyweight at the start of production will influence the total egg mass produced.
- The rearing period is a key developmental time for future success during the laying period – it is an investment phase.
- The rearing period is a training period.
- Transfer birds before egg production starts.

Bodyweight is a key factor for flock management as this will influence the future performance of birds.

As a consequence, bodyweight should be controlled during the whole life of the layer flocks. Management, in particular nutrition and lighting programs, can help to control bodyweight and let the birds express their genetic potential at 100%. ■