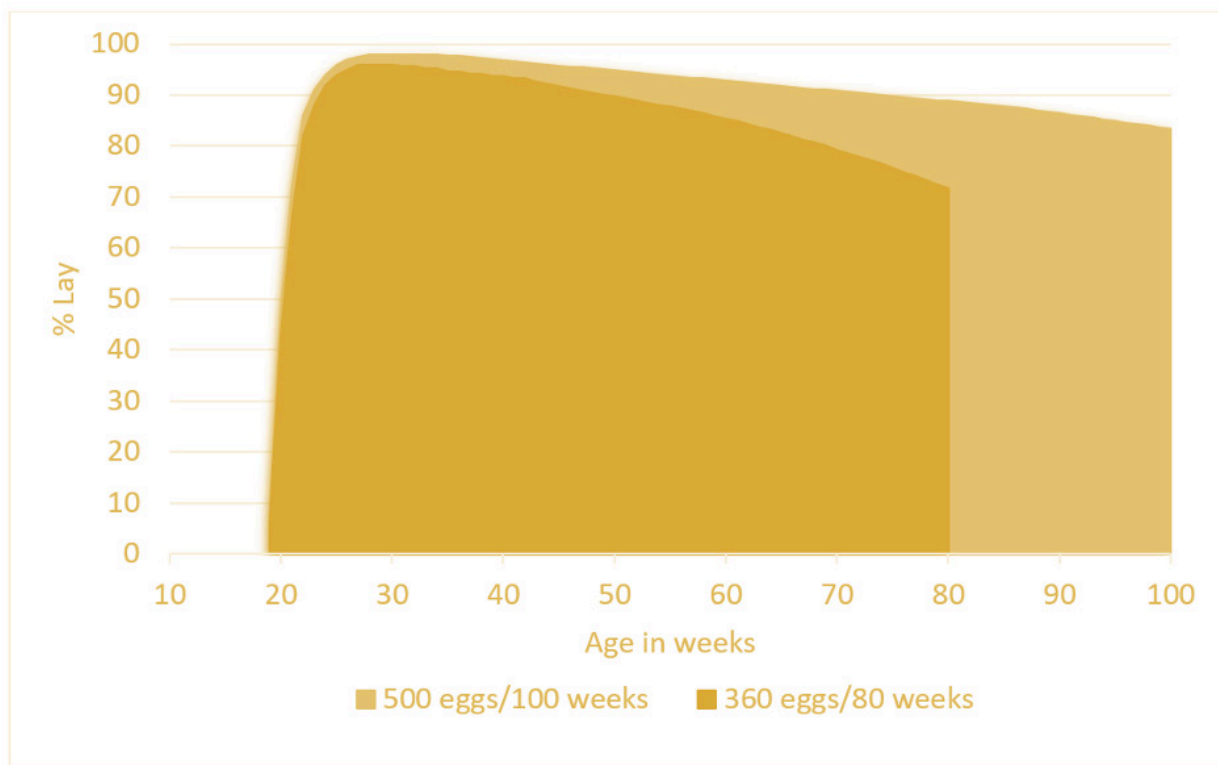


# Ultimate Layer™



Genetics, tailored nutrition and the breeders rearing guides can successfully lift the laying cycle of free-range hens beyond the UK's 72-week average to 100 weeks. This target is nicely depicted in the graphic below. It is much later in the production cycle when you get the most profit and that is when you start to make money to recover the purchase price of the pullets and why it is becoming more attractive to take layers through a longer production cycle. However, there are many challenges to overcome, to successfully take birds to 100 weeks of age and for them to continue to produce quality eggs.



## What are the nutritional challenges of taking laying birds to 100 weeks of age?

One of the challenges of keeping layer flocks for longer is maintaining consistent performance. It is important that pullets receive an appropriate diet throughout the rearing phase so that they meet the recommended adult pullet target weight by 14-16 weeks of age and have the correct body composition to sustain egg production beyond 80 weeks. A specific growth curve must therefore be followed, and one should follow the recommendations found in the breeding companies rearing guides. This is particularly important in the case of the 'long life' layer where persistency in lay is expected. Agritech has developed Ultimate Layer containing vital nutritional components to improve performance from 60 weeks of age, focusing on the areas below that are critical for nutritional health.

## **Liver health**

The liver is one of the key organs for birds in a longer production cycle when birds are producing eggs for 60-100 weeks. A healthy liver influences egg weight, laying rate, persistency in lay, egg-shell quality, mortality, and feed conversion. The older birds become the more egg mass they have produced and the more challenging it is for the liver to keep healthy. The main challenge is to prevent the risk of developing a fatty liver.

Furthermore, liver health is linked to egg-shell quality through the metabolism of vitamin D. Egg shell quality deteriorates when the liver is less efficient in activating vitamin D3 which is necessary for calcium transportation to the egg gland. We use a more bioavailable form of D3 (Hy-D) which regulates calcium and phosphorus metabolism more efficiently. Nutritional factors that can stimulate the recovery of the liver and also able to prevent issues with fatty livers are diets with the inclusion of choline.

So it is important for the hen throughout a longer production cycle by focusing on liver health and preventing the development of a fatty liver by providing energy from fat instead of energy from carbohydrates and by supplementation with sufficient amounts of choline.

Also included is natural source of betaine which is used to relieve liver metabolism and L-carnitine. It plays a critical role in energy production, transporting long-chain fatty acids into the mitochondria so they can be oxidized to produce energy. It also transports the toxic compounds generated out of this process to prevent their accumulation.

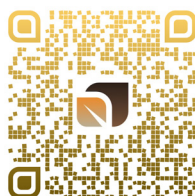
## **Gut health**

Gut health has become a popular topic in recent years with the reduced use of antibiotics. A healthy gut ensures optimal nutrient and mineral absorption and is essential for shell quality. We include a source of Inulin a naturally occurring polysaccharide produced by many types of plants, most often extracted from chicory. The Inulins belong to a class of dietary fibers known as fructans and has prebiotic qualities. Prebiotics serve as an energy and growth source for the beneficial bacteria that live in intestine. In laying hens, Inulin has been demonstrated to significantly improve egg weight, laying rate and feed conversion in commercial laying hens.

## **Osteoporosis**

Osteoporosis remains one of the major welfare challenges for the egg industry and therefore cannot be ignored in any discussion relating to extending the laying cycle this why we include Hy-D which has been proven to improve bone strength and recent work at Roslin Institute confirmed that betaine not only improved bone strength but egg production and quality was also excellent.

In conclusion Ultimate Layer™ contains Hy-D (more bioavailable form of D3), natural betaine, L-carnitine, choline and Inulin when used a 1 litre per 1000 litres from 60 weeks of age will nutritionally aid layers and breeders to extend the laying cycle.



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