



Healthy liver:

The secret to optimising

broiler crop performance

Whitepaper
March 2022

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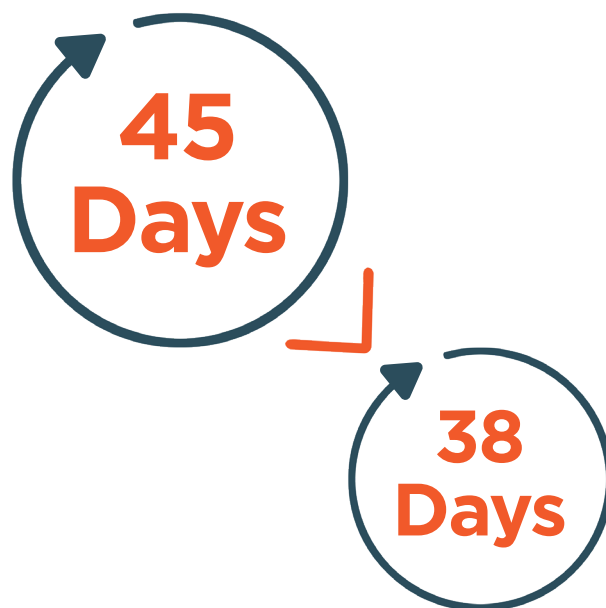
The secret to optimising broiler crop performance

The changing pressures on broiler rearing

In the fast-paced schedule of intensive poultry farming, it's easy to overlook how much has changed in the last ten years. Those changes have created fresh pressures within the continual challenge to achieve profitable cycles.

Chief among these changes is the compressed cycle times. Twenty years ago, the accepted length of a broiler crop was 45 days; now it has been reduced to 38 days. That's close to a 16% reduction in growing time but with no reduction in the expectation of bird weight. Any farm not achieving that crop duration will become uncompetitive against those that do achieve it, due to less product produced relative to the overheads of running the facility.

And then there's the ongoing battle for optimum EPEF (European Production Efficiency Factor). Again, a while ago, a score of 400 or more was a positive efficiency rating that enabled any operation to remain competitive. Nowadays, it needs a minimum score of 420 to really succeed. Combine this with the drive for a best-possible Food Conversion Ratio (FCR), and it really becomes clear why the pressure has increased dramatically.



The bird needs to thrive not just survive

With the increased intensity of demand on every crop, each broiler bird needs to be kept in peak condition and convert its food intake directly into weight gain throughout the cycle. Every intensive farm manager knows that it's not enough for a broiler to simply survive.

Central to a broiler bird thriving is its liver. Historically, the health of the liver was regarded as more important in laying chickens, given their longer lifespan and the requirement for good health throughout that span that would translate into good quality eggs. Left unattended, it is a killer, but it wouldn't normally progress this far within the short lifespan of a broiler, and hence typically thought of as a disease to watch out for in layers, not broilers. But we are now seeing increasing evidence that a healthy liver is critical to a positive yield from broiler crops, and poor weight gain can often be traced back to liver issues.

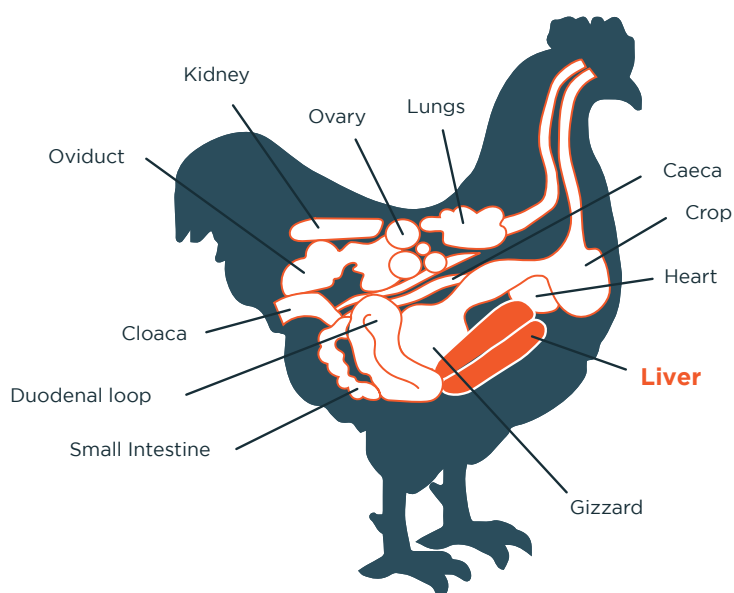


The role of the liver and the risk of FLS

The liver is a major organ in a bird. Among other functions, it plays an important role in digestion and metabolism, regulating the production, storage, and release of lipids, carbohydrates and proteins. In simple terms, this means that it processes the blood coming from the digestive system and sends it on round the body in a form that will provide energy and build up the body muscles and tissues. It is therefore critical to a bird gaining weight.

However, there is a problem when it comes to the successful functioning of the liver in a broiler bird. Birds are predisposed to fat accumulation in the liver due to a poorly developed intestinal lymphatic system. Known as Fatty Liver Syndrome (FLS), it simply means that the liver retains more of the 'fat' coming from the digestive system than it should do, which in turn reduces the weight gain of the bird. It can occur at any point in a broiler's lifecycle, but most often occurs after 21 days when the bird becomes less active. This is the time when many farmers will see the FCR drop, as the liver constrains how much of the feed intake translates through into weight gain.

Along with Fatty Liver Syndrome, broilers can experience appetite suppression for a number of reasons, which results in a reduction in the amount of feed that they eat. This obviously has the same effect of reducing weight gain, and if it occurs in conjunction with FLS, can have a significant detrimental effect.



What can be done to enhance liver function?

Conventional additives and nutraceuticals given to broilers enhance general health and performance – multi-vitamins, Vitamin D3 specifically for bone strength, plant extracts for anti-inflammatory purposes, etc. These valuable supplements are essentially replacing the routine use of antibiotics, in the light of concerns around antimicrobial resistance.

Neither antibiotics nor these alternatives tackle Fatty Liver Syndrome. This requires a targeted supplement, such as Agrivite Hepatix from Interhatch, which acts as a hepatic regulator. This can be used both as a reactive treatment for cases of FLS, or as a preventative measure to maintain the liver functioning as it should ahead of any issues arising. Hepatix also acts powerfully as an appetite stimulant helping to keep broiler birds feeding well.

Agrivite Hepatix in action

In recent broiler post-mortems conducted by Interhatch, increasing incidents of Fatty Liver Syndrome have cropped up. As a result, we have been advising use of Agrivite Hepatix increasingly to our customers where they are reporting issues with suppressed weight gain. While we haven't yet conducted measured trials, on-the-ground results are clearly proving the benefit of this treatment, as demonstrated in the examples detailed below – farm details withheld by request of the customer.

Farm 1

Interhatch was called to this farm of 250,000 broilers to advise on issues being experienced with suppressed growth and a downturn in how much the birds were eating since the ration change at 21 days.

Due to recent incidents of Fatty Liver Syndrome, we advised a standard dose of Agrivite Hepatix going forward – 500ml per 1000L of water for 3 days on the feed changes at 21 days and 28 days. This proactive approach would help to ensure prevention of FLS as well as boosting appetite in the chickens.

The results were very positive with flocks maintaining food consumption throughout the cycles and their weight gain showing significant improvement.

Farm 2

Tom runs a 300,000 broilers facility with a number of houses. One house contained 50,000 birds with a young flock code – smaller chicks from younger parent birds, and therefore more weight to gain to hit the target weight within the 38-day cycle.

At both the Day-7 and Day-14 weigh-ins, these chickens were at only 95% of the target weight. Tom contacted Interhatch for advice on how to rectify this underperformance. We recommended Hepatix, based on its track record for enhancing weight gain, and implemented the standard dose of 500ml per 1000L of water on days 15, 16 and 17.

By day 21, the chickens were at 100% of target weight, and by day 28, they were 6% over target. As no other measures were put in place, Tom concluded that Hepatix had round turned the performance of his crop.

Verdict from an Interhatch specialist

Without measured trials, we can't provide statistics and graphs, but the experience we're having case by case with customers is that Agrivite Hepatix is consistently enhancing weight gain in broilers. We are undertaking more research to identify the prime times in the cycle to give it to the birds, but post 21-days is the obvious time to prevent FLS developing as the bird becomes less active. However, we have also seen benefit in introducing it as early as 7 days to ensure that the liver starts functioning as it should from the earliest stages.