Elanco

HTSi

Insight for healthier business decisions

Elanco

HTSi Annual Report 2025

Elanco

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Insight for healthier business decisions

Report created from 2024 data

What is HTSi?

Developed to enable poultry businesses to make informed decisions towards future improvements, Elanco's Health Tracking System (HTSi), is an established, independently verified and data-led broiler benchmarking platform.

Globally recognised, HTSi monitors the health and performance of birds, incorporating multiple lesions to assess intestinal health, respiratory stability, locomotor function and bird welfare.[1]

In-person expertise
Farm visits by the knowledgeable HTSi team guarantees ready access to the best expertise and individualised advice

For Poultry industry leaders who seek to continuously improve their business, HTSi is a data management platform that enables better understanding of flock health to drive timely, data-based decisions and robust benchmarking, leading to improved performance and profitability

Bespoke Intestinal Integrity (I^2) score system
Offering consistent and easy to compare intestinal health data

Established
Improving poultry production for over 27 years

Proven business benefits
Profitability, bird health and welfare, environmental

All key areas of bird health analysed
Full assessment that recognises the importance of gastrointestinal (GI) health, enabling informed decisions

Unrivalled breadth and depth of data
Providing meaningful benchmarking information, at any level of detail, for accurate predictive modelling

HTSi

Best practice

HTSi enables producers to monitor the general health of their birds. Establishing trends requires consistent HTSi sessions, as well as a selection of birds that represent the company. This means birds from a wide range of ages, and from a variety of farms to ensure that data captured is representative of the whole flock health.

HTSi is:

- A valuable tool to help poultry producers monitor trends, opportunities and focus areas
- A way to identify and overcome challenges at a granular level
- A robust benchmarking system, allowing meaningful conclusions to be drawn and more insightful business decisions to be made

FAQ:

Why do we look at "healthy" birds?

HTSi is not a diagnostic tool, and should be used to assess the health of average birds in a shed. When used continuously, this creates a pool of data that represents the standard birds in a region, or company, which in turn allows us to use predictive modelling to workout what is "normal" for the region or company. HTSi can then identify when any flock of birds are outside of what is expected.

HTSi is not:

- A replacement for veterinary advice
- A way to investigate health problems

Global reach

Recognised globally, HTSi is trusted by **350 poultry businesses in 60 countries**. In 2024, **317 businesses** used routine HTSi sessions as a way to make informed decisions around flock health.

2024

The three countries with the highest averages this year are:

Respiratory Index (RI)

- **UK** 99.7
- **Sweden** 99.6
- **Denmark** 99.5

Intestinal Integrity (I^2)

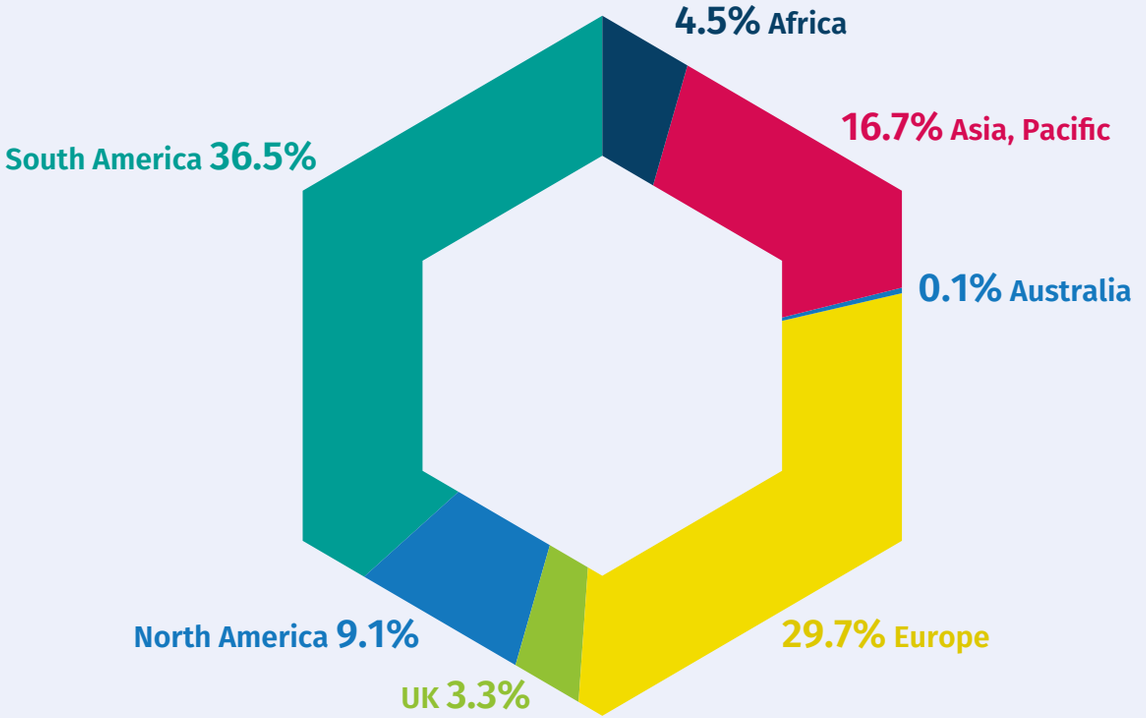
- **Nicaragua** 98.8
- **Zambia** 97.3
- **Peru** 97.8

Feed Induced Immune Response Factor (FIIR)

- **Canada** 99.8
- **Australia** 99.7
- **Hungary** 98.9

(see page 19 for more information on FIIR)

Number of Birds vs. Region in 2024



2024 in the UK

As part of Elanco's value adding HTSi, the team continued to travel around the UK, collecting meaningful data to provide customers with trusted expertise and information to make better business decisions.

4,862 birds
necropsied

217 farms
539 houses

8 broiler companies
covered

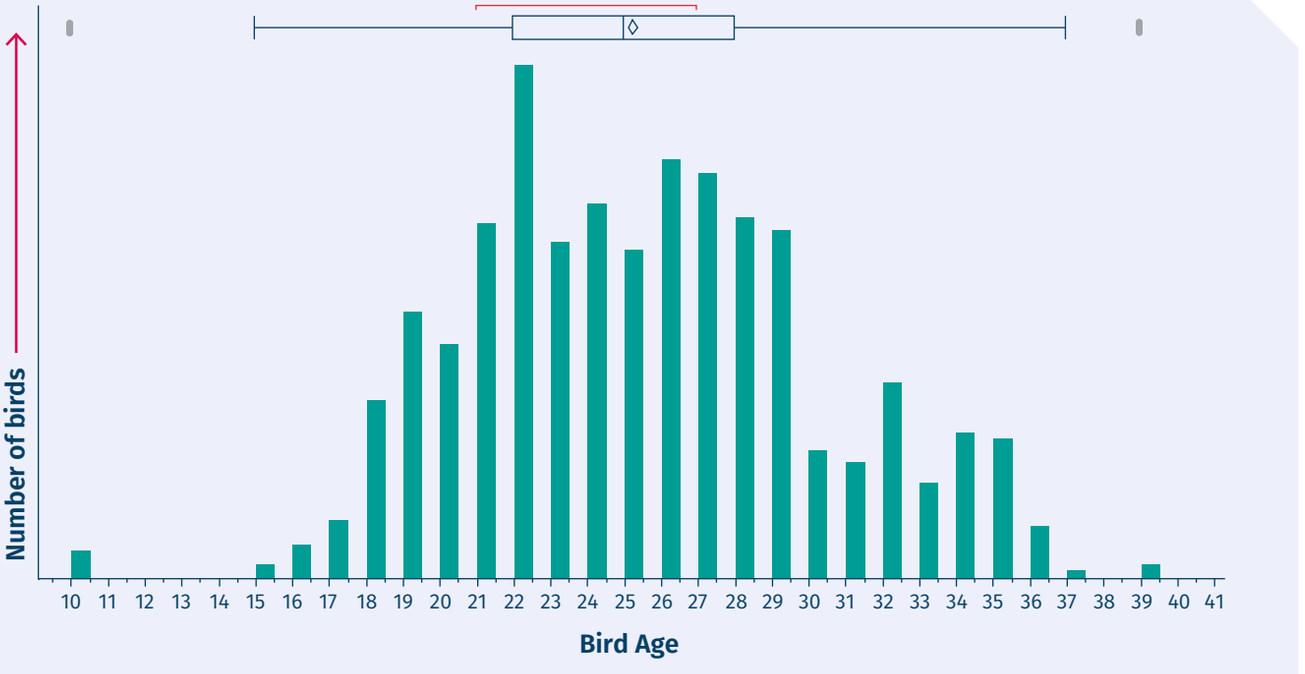
By a team of
8 Technical Experts

Postings by age

HTSi sessions in 2024 included birds ranging from 10 to 39 days of age, with an average of 25.3 days. The majority of sessions were held between 18 and 32 days. Our extensive data base ensures a wide range of bird ages can be covered, allowing insights into intestinal health at most ages.

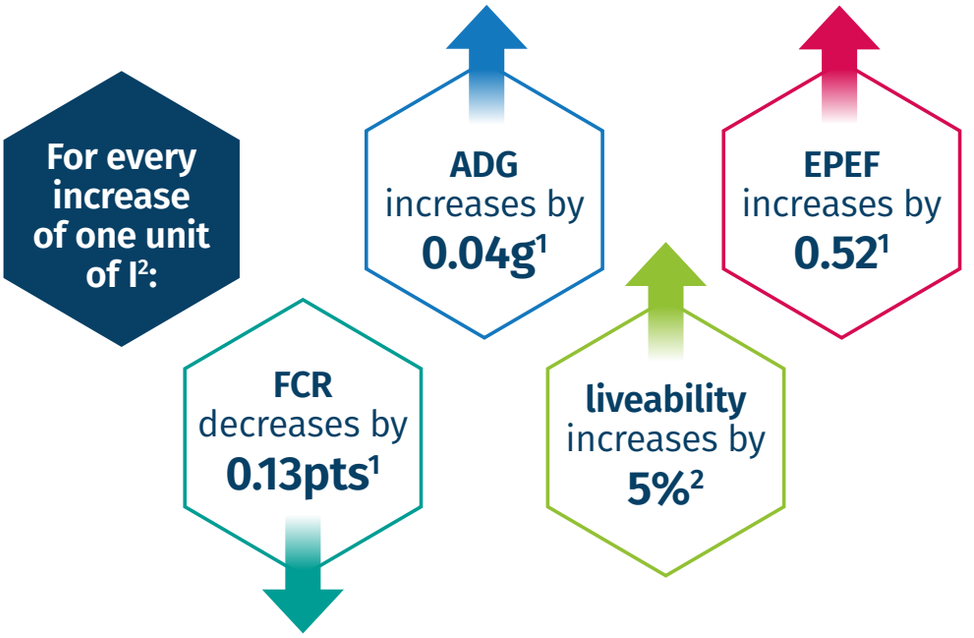
Ross - 94.8%
Hubbard - 4.8%
Cobb - 0.4%

The prevalence of both Hubbard and Cobb have slightly increased compared to 2023 data, however the impact on the prevalence of Ross 308 birds was minimal at -0.6%



Intestinal Integrity (I^2)

Developed to consistently and reliably assess intestinal health, the Intestinal Integrity (I^2) index has been twice independently validated.[1,2] It assesses 23 intestinal health lesions via a unique weighted algorithm to give a score out of 100.



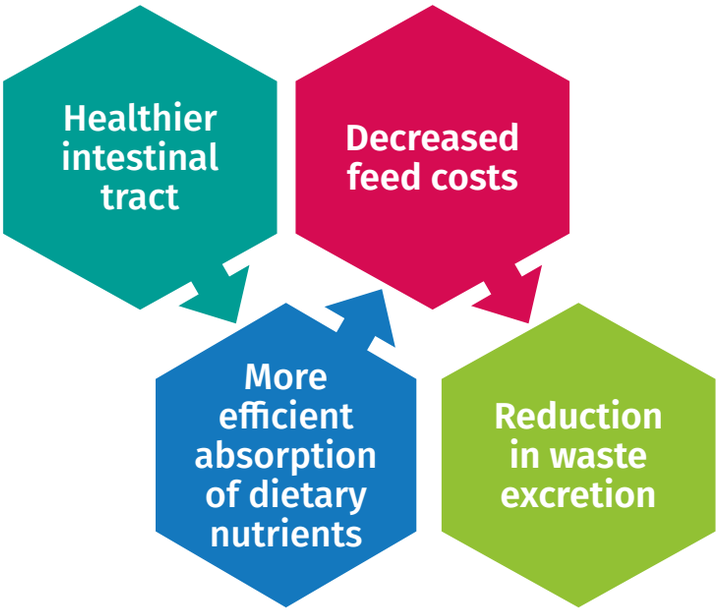
Proven business benefits

At current feed prices[3] a poultry company producing 100 million broilers per year, partnering with Elanco to improve the I^2 index by 5 points could mean an annual income boost of:

£497,640[4]

By understanding the current challenges and seasonal trends, proactive intervention can reduce potential losses.

Identifying the opportunities to improve ADG, FCR, EPEF and percent livability.[1,2]

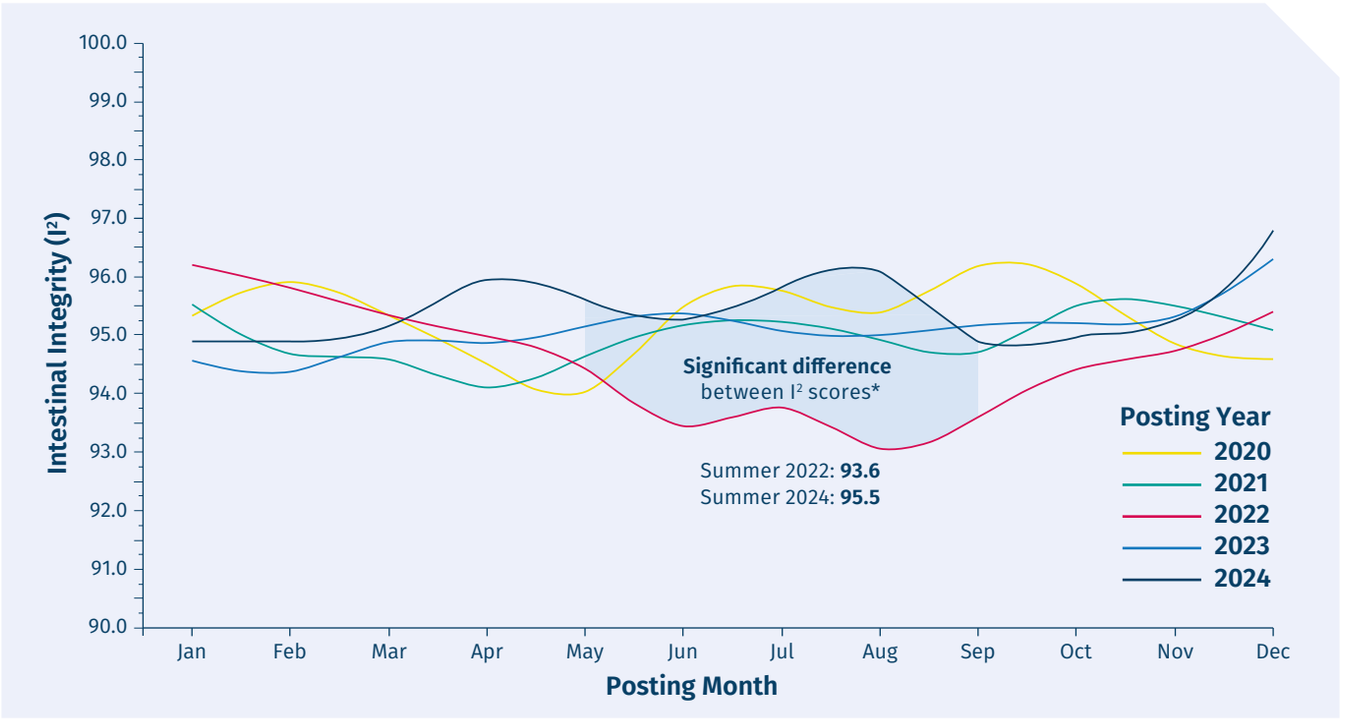


The I^2 index, combined with information contained in the HTSi database, could be used to identify the yield gaps in production and suggest possible interventions to close these gaps.

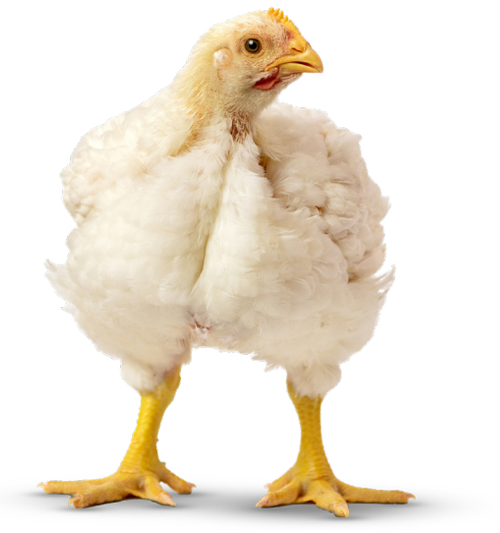
Alexandra L. Swirski et al., Novometrix Research Inc.

Intestinal Integrity

Trends over time



Over the course of 2024, Intestinal Integrity has improved , with a more stable average across the year, similar to that of 2023 and 2021. This was driven by high I² averages seen in April and August, finishing strong with December's average the highest of the past five years - with the year ending on the highest I² average seen across the 12 months - 96.8.



I² across Europe

The below diagram shows the average I² score in each region in 2024.

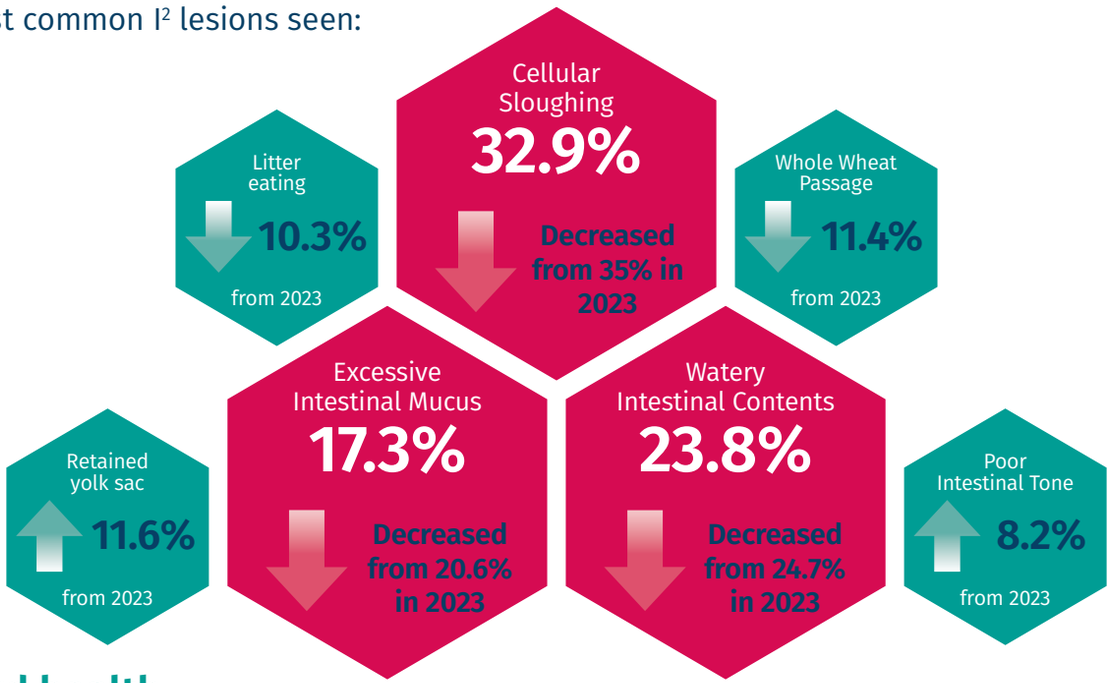
* data from May to September in both 2022 and 2024, p value = <0.0001

Intestinal Integrity

A total of 23 different lesions sit behind the Intestinal Integrity score. The data below shows the most common lesions, aside from coccidiosis, seen in HTSi sessions in 2024.

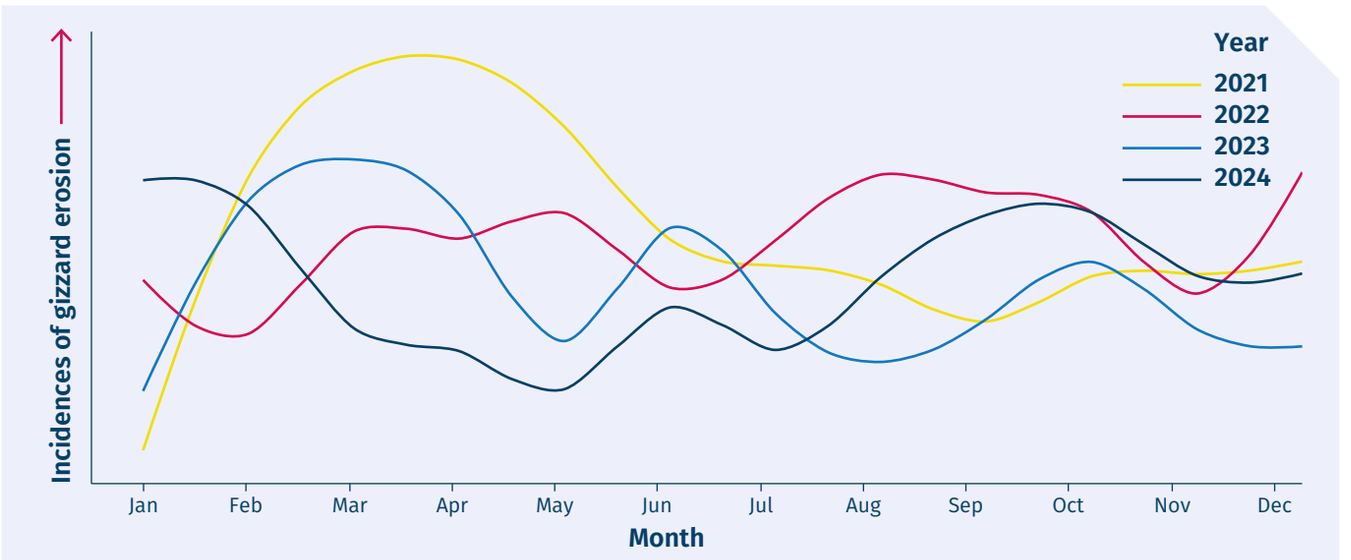
Key contributors

Excessive intestinal mucus, cellular sloughing and watery intestinal contents remained the most common I² lesions seen:



Gizzard health

After an increase in gizzard erosions was seen from 2022 to 2023, 2024 shows a slight decrease from 26% prevalence to 21.1%.

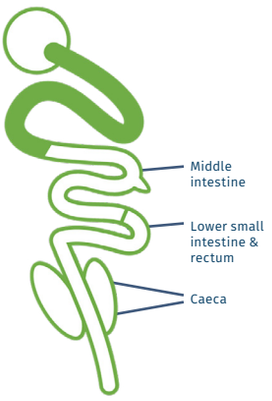


Of the ulcerations noted in 2024, 91.3% were low level (score 1), 7.4% were moderate, consistent with a score of 2. Severe (score 3) erosions made up 1.3% of the total birds affected.

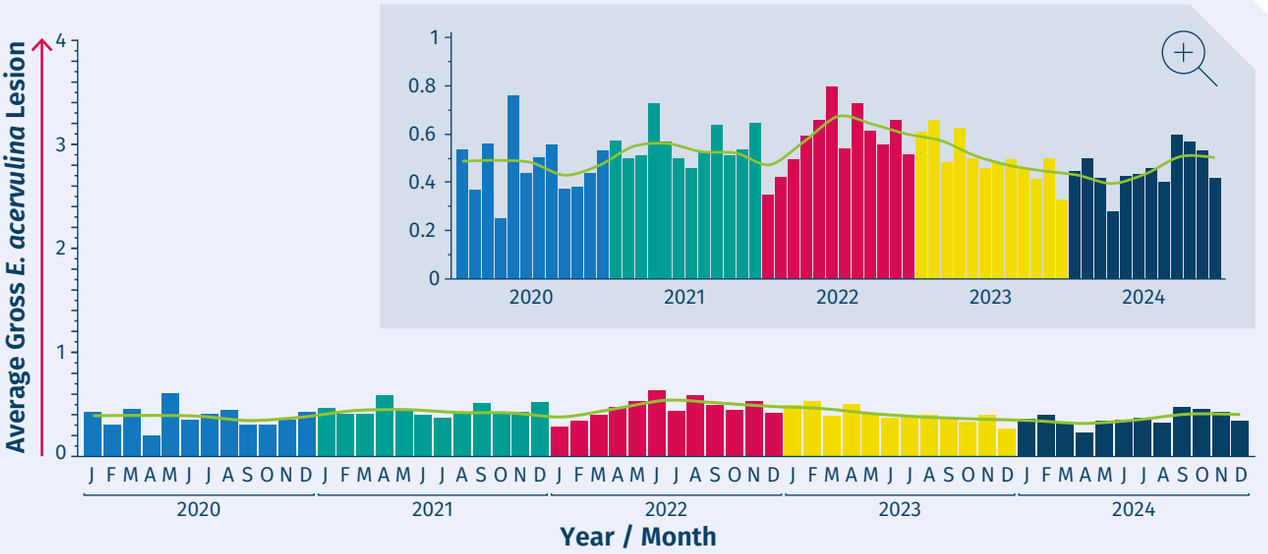
The most common age for birds to see mild (score 1) gizzard erosions was 24 days, where more severe erosions were most frequent at 27 days.

Coccidiosis – *E. acervulina*

A malabsorptive species of coccidiosis, *E. acervulina* is characterised by white scars on the inside of the intestine, commonly in the duodenal loop. In 2024, **32.5% of birds were affected** by this species, a reduction of 4% from 2023 levels.



E. acervulina trends



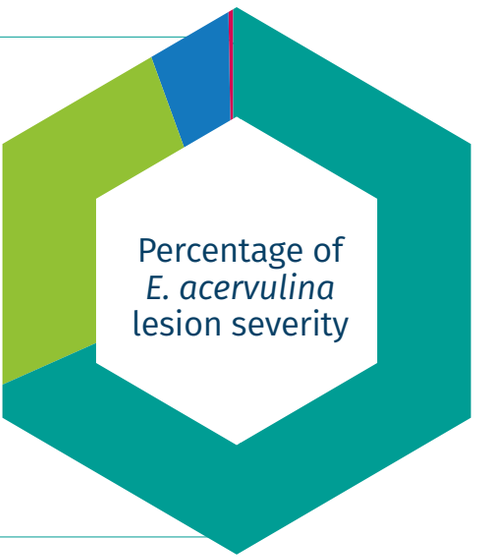
Overall, levels of ***E. acervulina*** in 2024 were the lowest recorded in the HTSi dataset in the past five years. The reduction seen in 2023 continued throughout the first half of 2024, with April's average the lowest since April in 2020. A stable summer period was followed by an expected seasonal increase in September, the highest average seen in the year. Since then, levels over the last quarter of the year have reduced, although December's average is marginally above what was seen the same time last year.

Of the **1,581 birds** showing *E. acervulina* lesions;

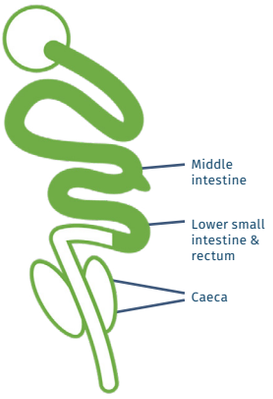
69%
were mild (score 1)

26%
were moderate (score 2)

5%
were severe (scores 3/4)

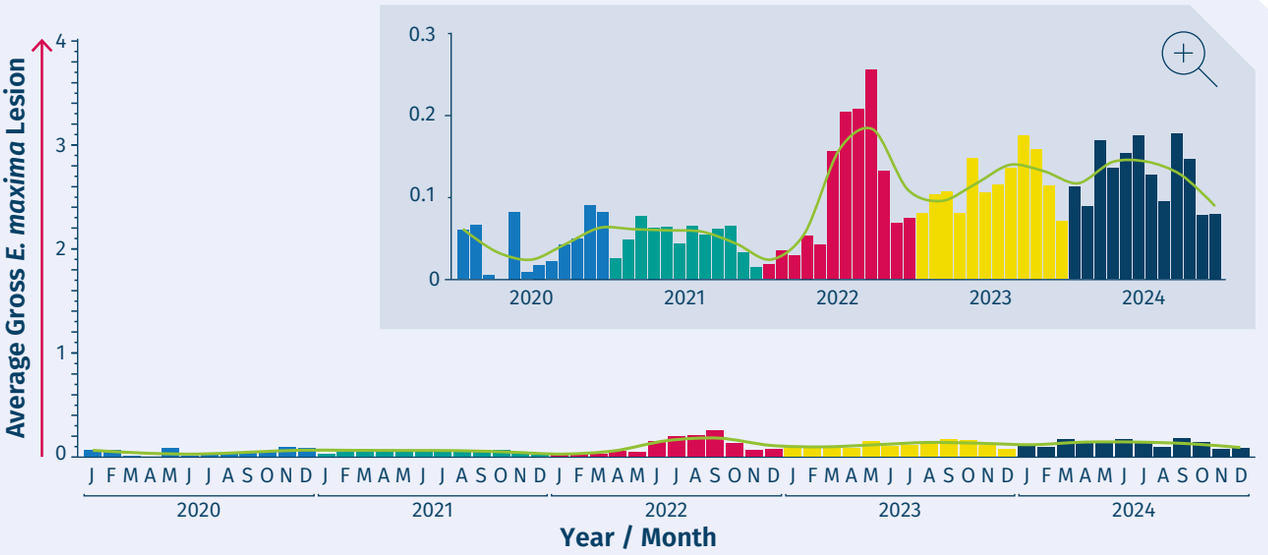


Coccidiosis – *E. maxima*



The most detrimental coccidia species to a farm's performance and profits, ***E. maxima*** damage causes red petechiae on the outside of the intestinal tract. In 2024, **11.2% of birds** were seen to have gross lesions, confirmed by microscopy. This is an **increase from 10.6% from last year**, showing the increase of ***E. maxima*** incidences has not yet returned to 2021 levels.

E. maxima trends



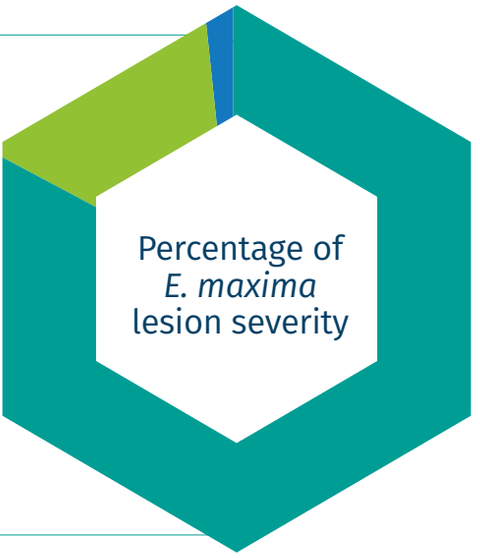
Levels of recorded ***E. maxima*** in 2024 remain elevated. Whilst May and September presented birds with the most lesions, the average incidence was lower than the peak seen in 2024. The last three months of the year saw a decline in ***E. maxima*** lesions, levels have not yet returned to the stability seen in 2020 and 2021.

Of the **546 birds** showing *E. maxima* lesions;

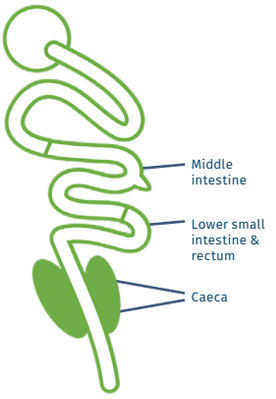
83%
were mild (score 1)

15%
were moderate (score 2)

2%
were severe (scores 3/4)

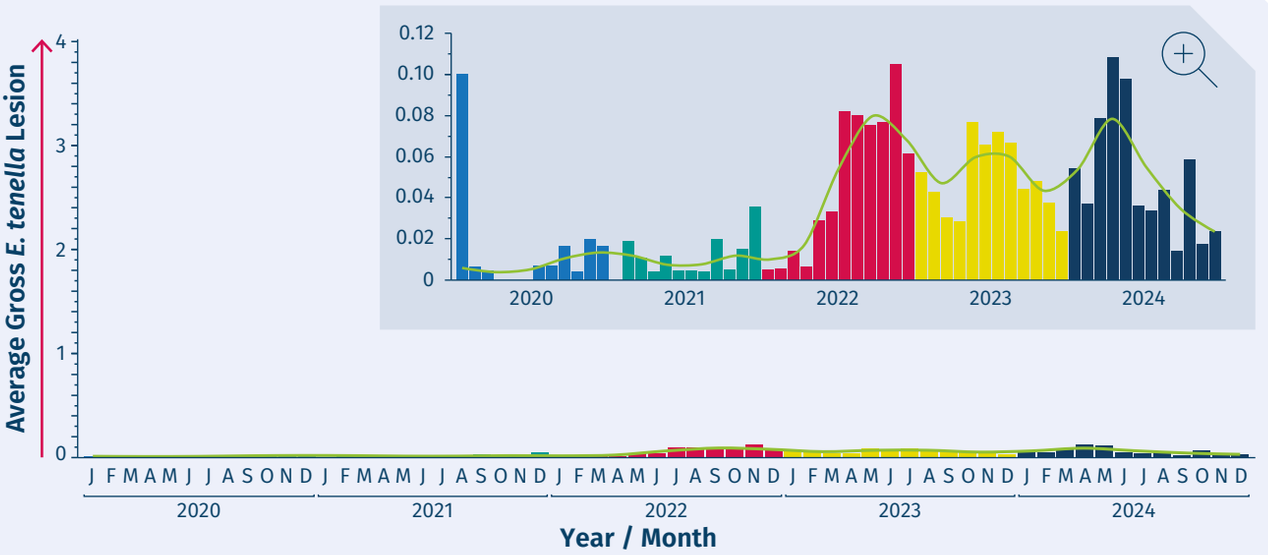


Coccidiosis – *E. tenella*



Whilst clinical cases are rarely seen on farm as part of HTSi surveillance, **5.1% birds in 2024** presented with gross *E. tenella* lesions, reduced from 10.6% in 2023. This is the only common coccidia species that will cause mortality in the birds.

E. tenella trends



Whilst incidences of ***E. tenella*** have been more prevalent since 2022, the overall average remains on the same scale as the previous ***E. acervulina*** and ***E. maxima*** graphs and continues to have minimal impact on UK flocks in this data set. Starting the year with a similar frequency to 2023, the average score increased in April and May, after which it has continued to decrease throughout the rest of the year.

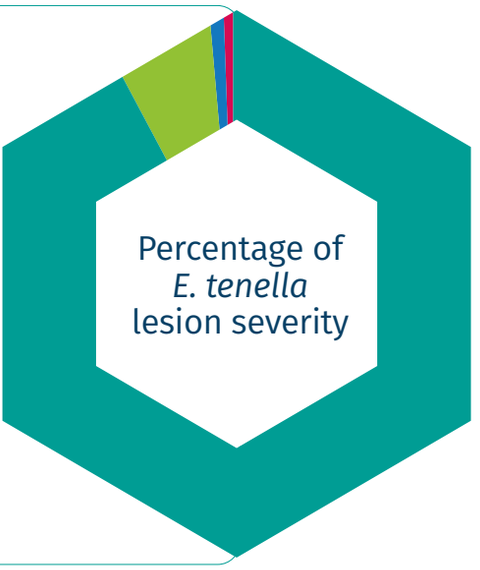
Of the **229 birds** showing *E. tenella* lesions;

92%
were mild (score 1)

7%
were moderate (score 2)

1%
were severe (scores 3)

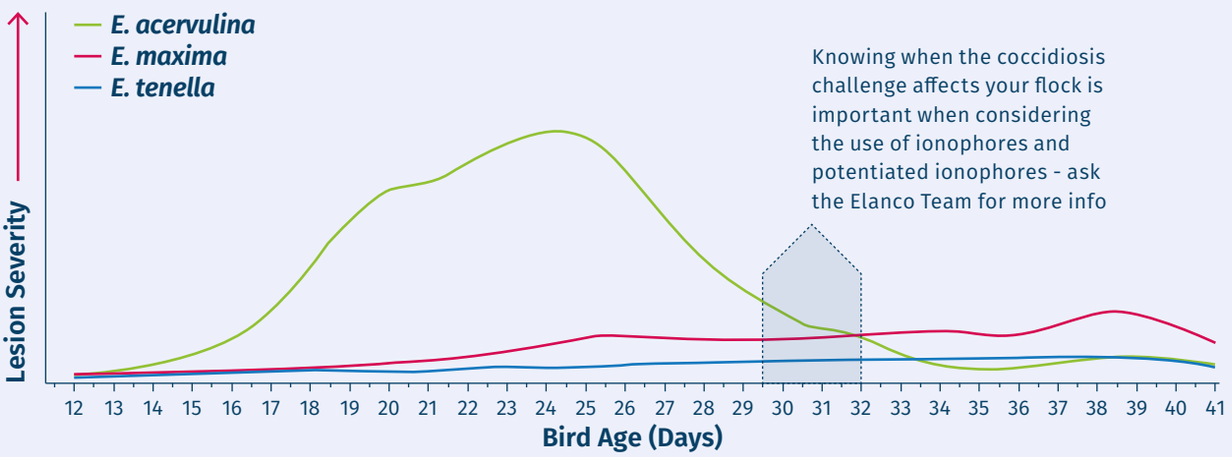
One score of **4** was seen



Less moderate and severe lesions were noted this year compared to 2023.

Coccidiosis peaks

2024 coccidiosis peaks by species



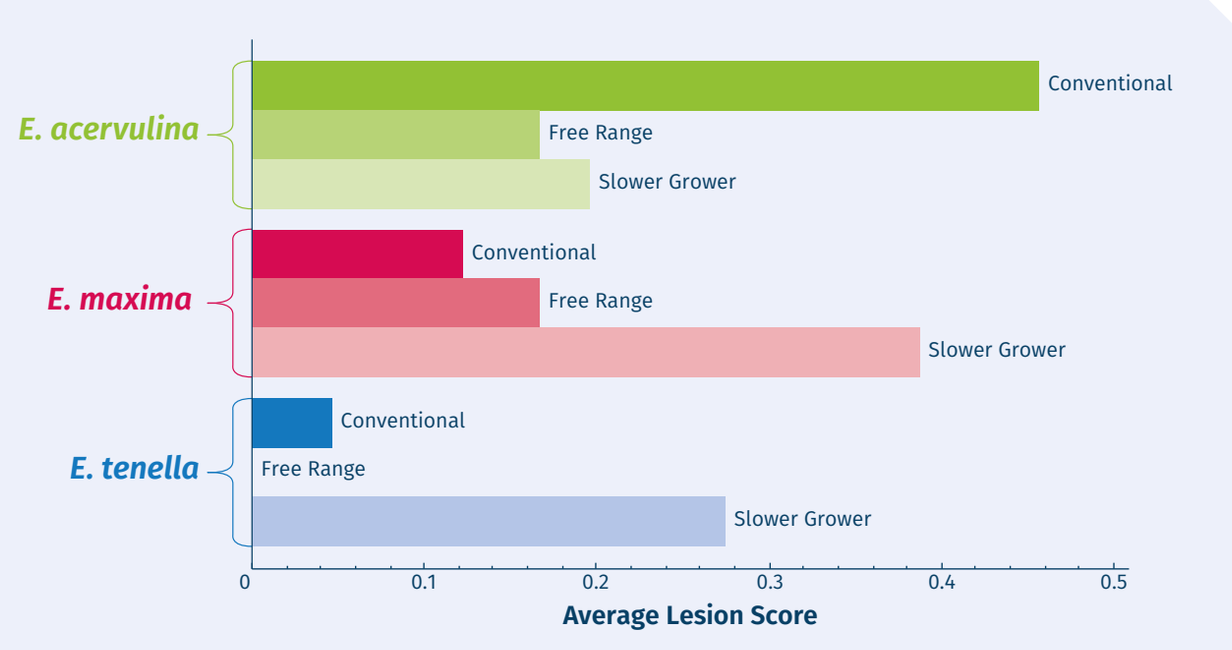
The age at which birds most commonly were affected by ***E. acervulina*** has moved back 1.5 days from 2023 data, to 24.5 days of age.

E. maxima was noted in low levels from 20 days onwards, the most common age was 38.5 days.

Minimal ***E. tenella*** was recorded in 2024, with no obvious peak age.

Coccidiosis peaks by market type

There was a significant difference^ between conventionally grown birds and slower growing breeds, with conventional birds showing higher levels of ***E. acervulina***, yet slower growers showing higher levels of ***E. maxima*** and ***E. tenella***.

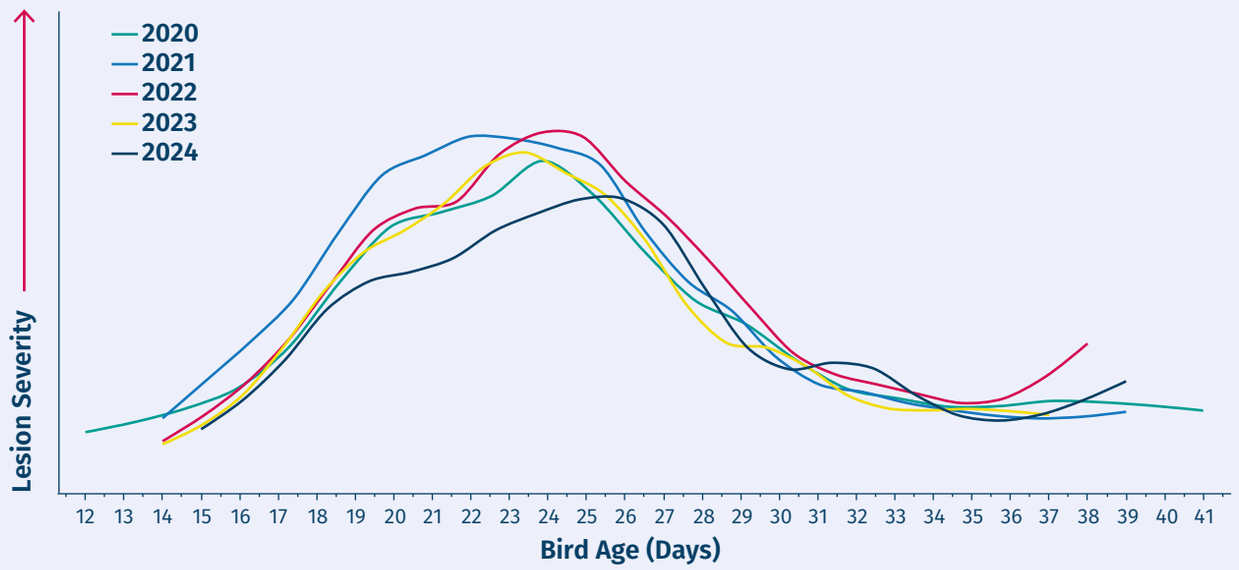


^p value = <0.0001

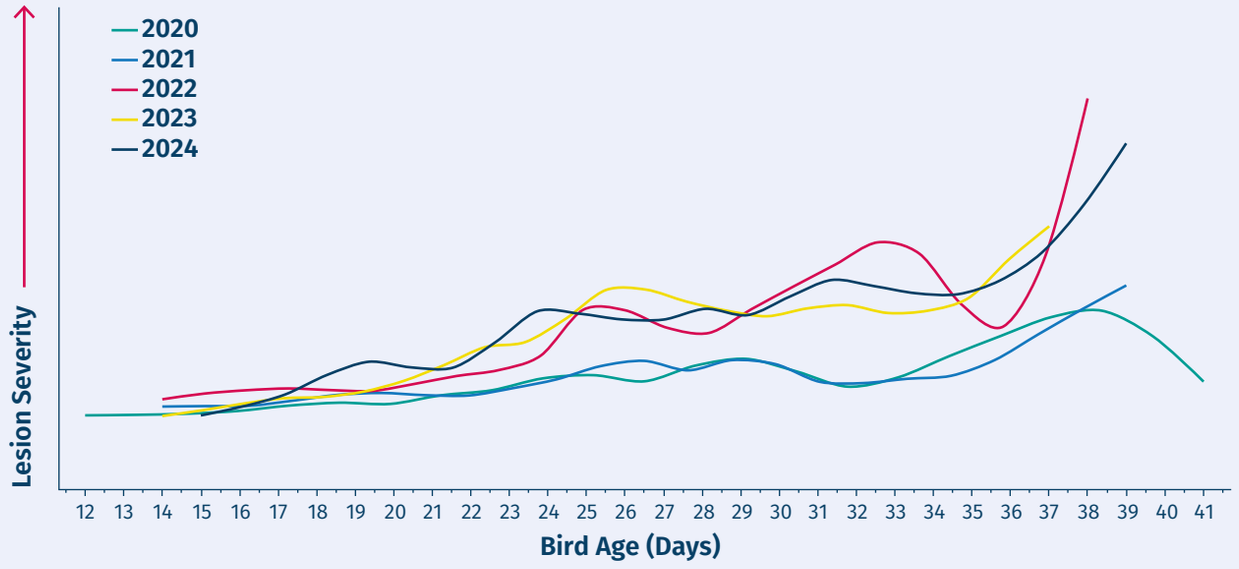
Coccidiosis peaks by year

The following graphs show how the peaks of coccidiosis have moved, if at all, year on year.

E. acervulina vs bird age

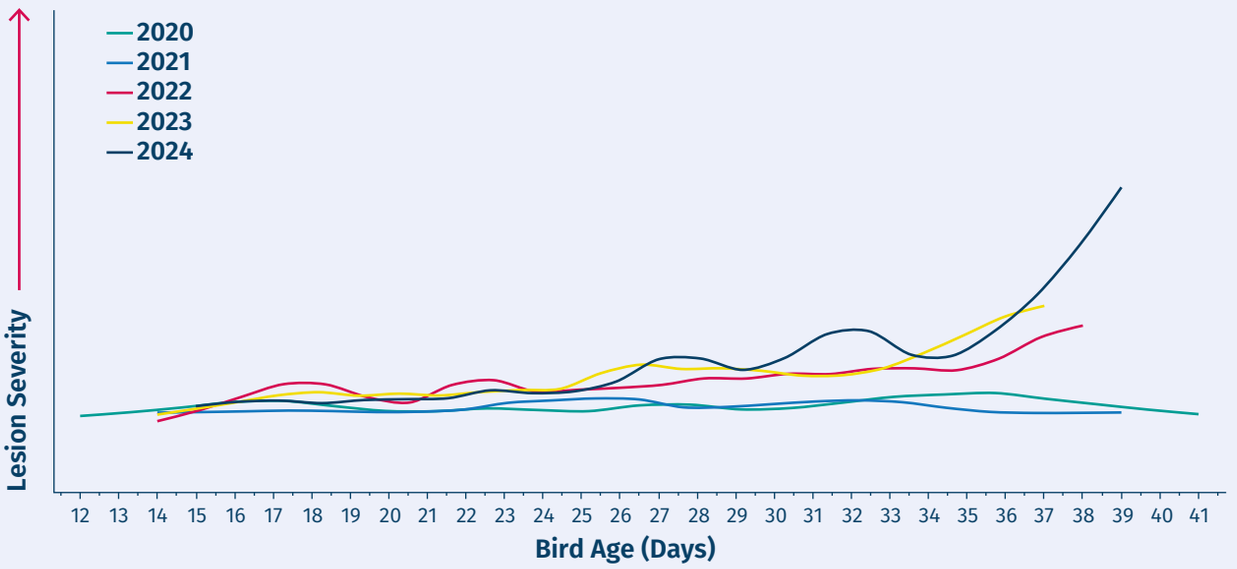


E. maxima vs bird age



Coccidiosis peaks by year

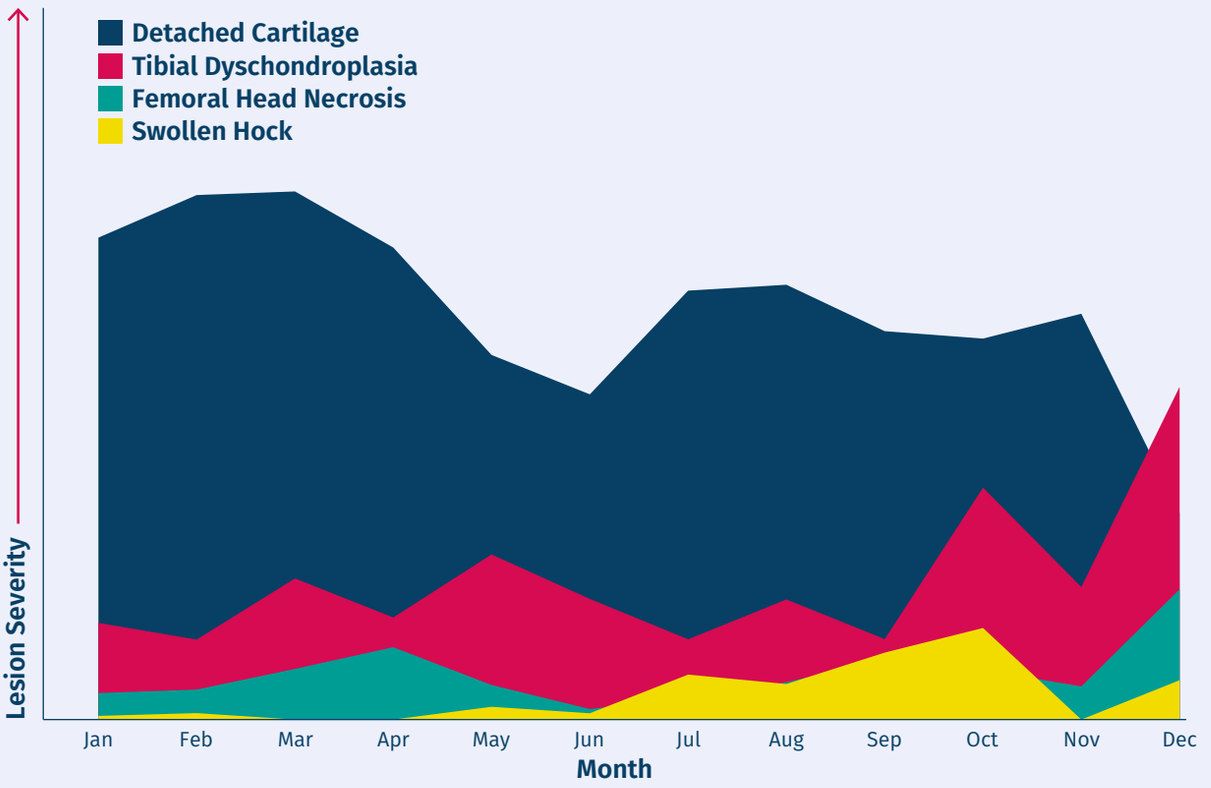
E. tenella vs bird age



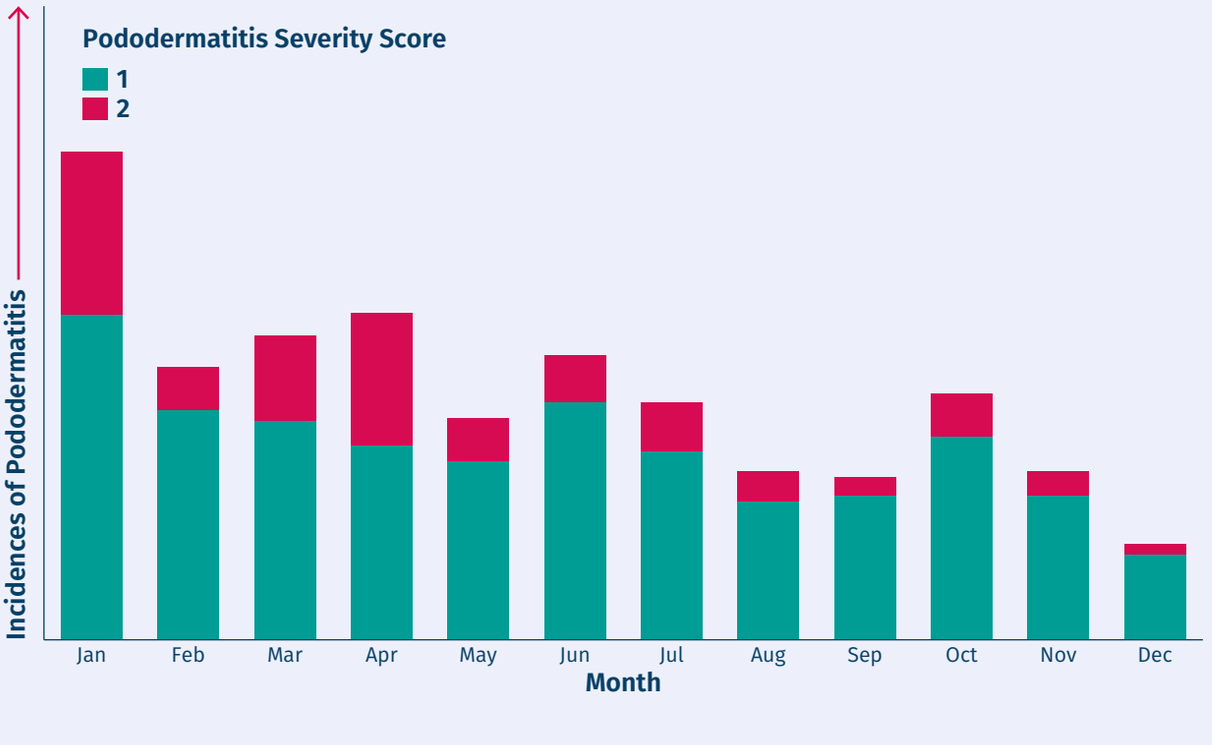
Whilst still low, levels of *E. tenella* were noticed in birds over 35 days, more than any other age. Although year on year data at this stage of the bird's life is limited, 2024 shows a higher average than other years where birds older than 37 days were necropsied. The increase in slower growing breeds could correlate with this, although more data is needed to be conclusive.

Locomotor health

Leg health over time



Pododermatitis



Veterinary comments

From Joshua Davison MRCVS –
Poultry Technical Consultant, Elanco.

The poultry industry again weathered an impressive array of intra-industry and macroeconomic challenges throughout 2024, that will likely have repercussions for 2025. These effects were further complicated by the wet and mild weather for 2024 throughout the country. Therefore, it is pleasing to see another year of HTSi data that reinforces the impressive way the UK poultry industry continues to adapt and efficiently produce affordable protein from healthy birds.

Elanco's Intestinal Integrity (I^2) metric encompasses a broad range of bird health measurements that enable objective comparisons over time. **The 2024 data was robust with peak I^2 found in November and December, continuing the recovery from a comparatively weak 2022 (page 8). Key to this was the continued and stable coccidiosis control strategies implemented by growers.** Within the contributors to I^2, cellular sloughing, intestinal mucus and watery contents were the most prevalent findings, all with subtle decreases compared to 2023 (page 9).

Low coccidia lesion scores indicate coccidiosis was well managed throughout 2024; *E. acervulina* scores were at their lowest level for the previous five years, while *E. maxima* and *E. tenella* were similarly low to 2023. *E. tenella* scoring in older birds showed a small increased incidence compared to prior years that may warrant ongoing monitoring and investigation if thought to be clinically significant (page 12). **It must be remembered that these coccidia lesion score changes are subtle, when compared to the graph axes scales, in keeping with the low level of clinical coccidiosis observed. Between Eimeria species, significant differences were found between different markets; 'conventional' birds having greater *E. acervulina* scores, with less *E. maxima* and *E. tenella* scores than 'slower growing' birds (page 13).** These findings may be expected due to the differing production systems and age profiles but are worth bearing in mind with possible future retailer demands.

Looking to 2025, the vagaries of avian influenza and the continued implementation of reduced stocking densities likely present the most pressing challenges. While the stocking density changes may impact producer and retailer logistics, at the bird level the potential disease pressure within a shed is still high. During this time, minimising other on farm management changes and continuing with effective and proven disease management strategies is an imperative. Effective and consistent drying out during turn around time is the most effective control strategy for coccidia oocyst management; careful planning will be required to reduce any negative impact on turn around times during a pressured time if each bird is to achieve peak performance.

Wishing you and your businesses the best for a prosperous 2025.

Solutions to support Intestinal Integrity

Ionophores

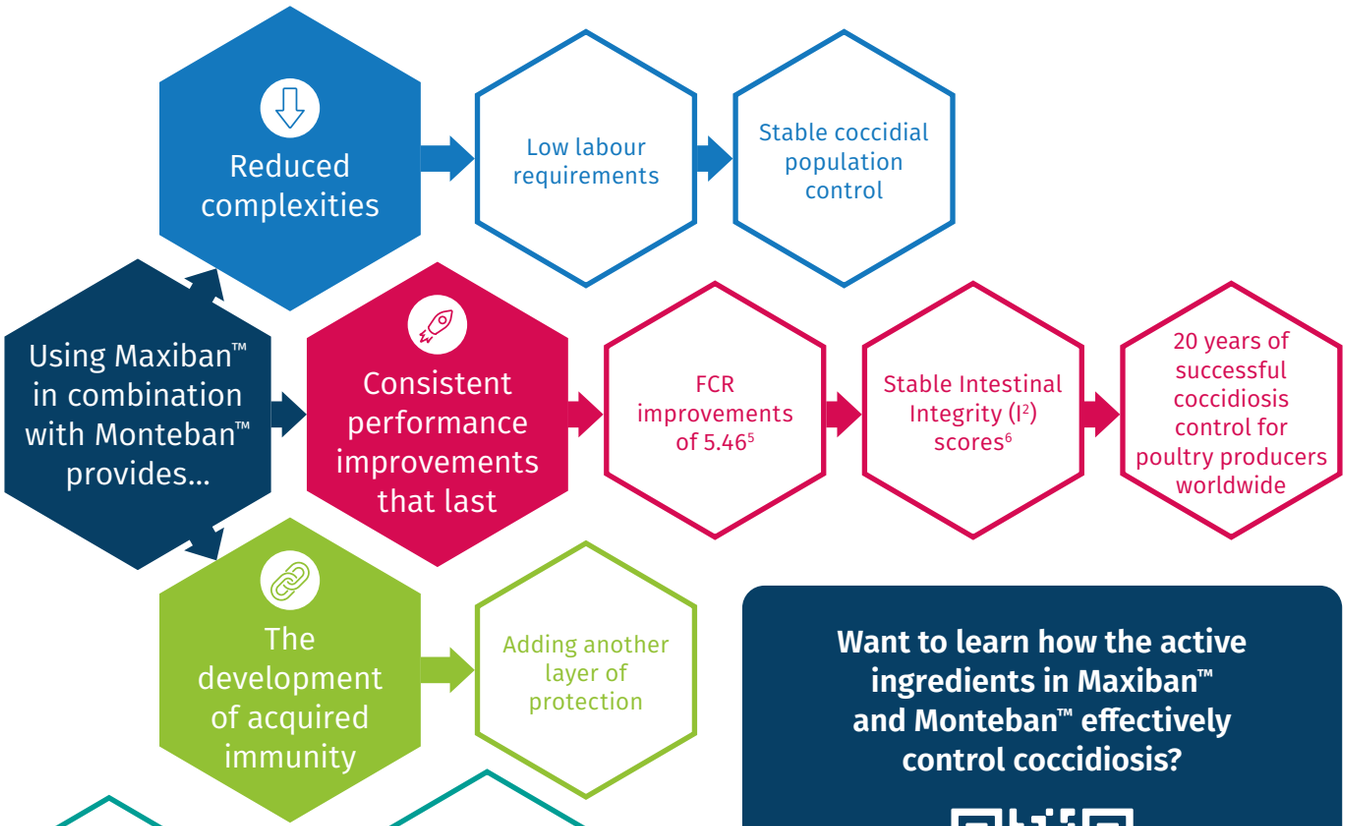
Used since the 1970's, ionophores are still an effective and efficient tool to improve Intestinal Integrity, and evidence of resistance to these compounds is virtually non-existent. Ionophores are classified as antimicrobials and have a wide-spectrum effect against several micro-organisms, however, they are not used in human medicine and there is currently no scientifically proven association between bacterial resistance and ionophores, the below video demonstrates the complex mode of action.

Elanco Maxiban™

Use MAXIBAN™ in combination with MONTEBAN™ for stable coccidiosis population control. Consistently trusted by poultry producers to protect against the effects of coccidiosis for over 25 years.

Elanco Monteban™

Want to achieve stable & continuous coccidiosis control?



Want to learn how the active ingredients in Maxiban™ and Monteban™ effectively control coccidiosis?

Scan the QR code to watch how they work inside the bird

Good coccidiosis management can reduce antibiotic usage by up to **5x**[7,8]

The impact of poor coccidiosis control costs approximately **£10.5 BILLION** per annum worldwide[9]

Solutions to support Intestinal Integrity

β-mannans

Beta-mannans are anti-nutritional factors (ANFs) in the diet and indigestible for monogastric animals. They are:

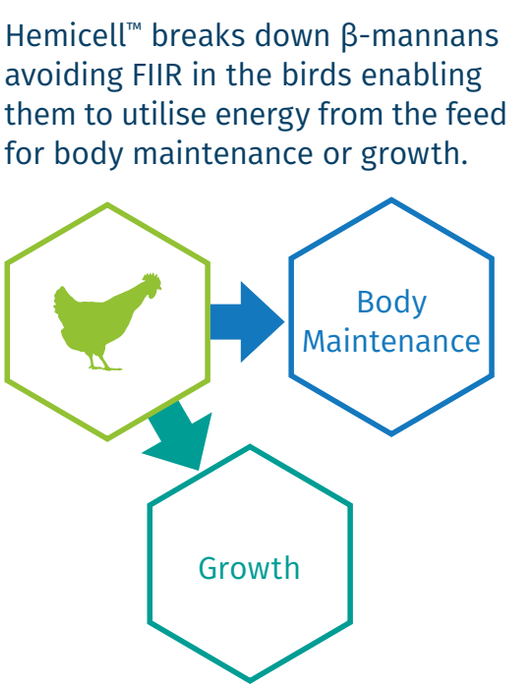
Found in common vegetable feed ingredients

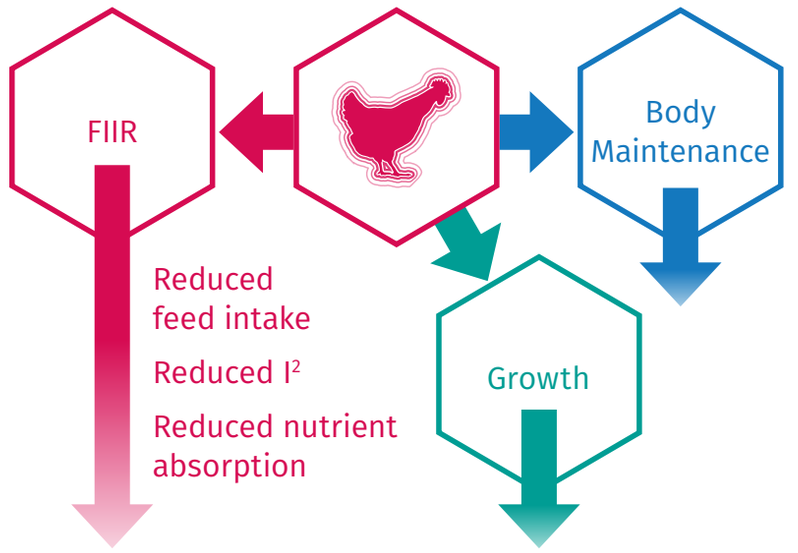
Soluble, so easily distributed throughout the GI tract

Not affected by feed processing

As **similar mannose structures** are found in **cell surfaces of many pathogens**, animals **mistake β-mannans as a pathogen** and initiate a wasteful immune response - Feed Induced Immune Response (FIIR)

Hemicell™ breaks down β-mannans avoiding FIIR in the birds enabling them to utilise energy from the feed for body maintenance or growth.





In the average broiler shed, birds will divert some of the energy to the FIIR, with detrimental effects on feed intake.

Elanco Hemicell™-XT

Hemicell™ XT stops the expensive effects of β-Mannans The patented energy sparing enzyme, breaks down β-Mannans to completely prevent the Feed induced immune response (FIIR) and waste of energy that they cause.[10,11]

Recent meta-analysis on global HTSi data has revealed the extent of the impact of FIIR on the I^2 index, producing a

FIIR FACTOR OUT OF 100

Scan the QR code to watch how Hemicell™ breaks down beta mannas inside the bird

Solutions to support Intestinal Integrity

GalliPro® Fit

The easy choice.

A probiotic with a unique triple strain *Bacillus* combination, that positively influences the gut microbiome and promotes Intestinal Integrity.

Maximum benefit

GALLIPRO® FIT unlocks the nutritional potential of your feed[12]

GALLIPRO® FIT combines three naturally occurring *Bacilli* strains that were carefully selected to effectively inhibit undesirable bacteria, as well as produce beneficial enzymes.

This increases nutrient availability from the feed and can lead to improvements in feed conversion and bodyweight under commercial conditions.[12,13]

1

***B. subtillis* (DSM32324):**

Competes with gram negative and positive microbes;[14] improves protein availability[15]

2

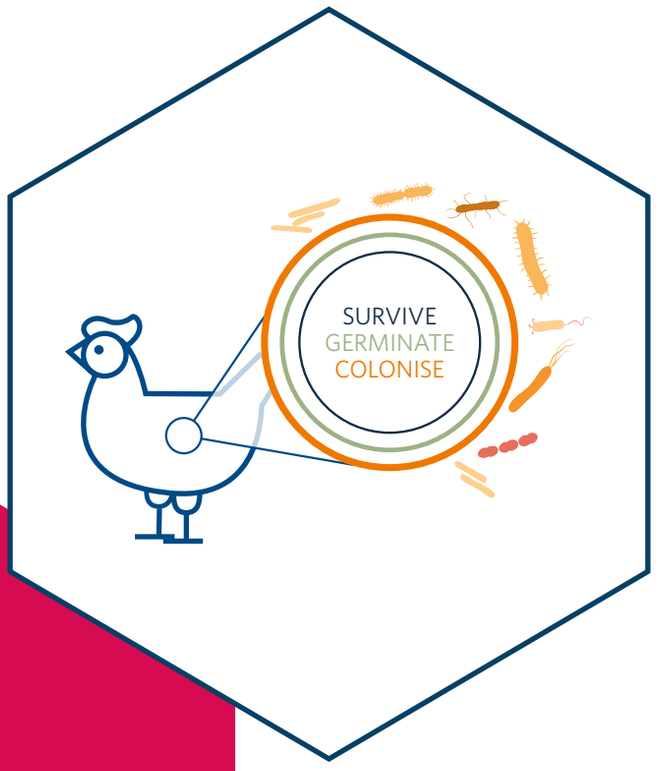
***B. subtillis* (DSM32325):**

Competes with gram negative and positive microbes[14]

3

***B. amyloliquefaciens* (DSM25840):**

Improves energy availability from non-starch polysaccharides;[15] Improves protein digestibility[15]



GALLIPRO® FIT promotes normal gut function by outcompeting undesirable bacterial species

The three *Bacillus* strains in **GALLIPRO® FIT** were carefully selected to:

1. Rapidly colonise the intestine;
2. Form a beneficial biofilm in the gut which acts as a physical barrier to undesirable bacterial species;[16]
3. Produce lipopeptides (Surfactins and Fengycins) known to be inhibitory to some undesirable bacterial species;[17]
4. Have superior siderophore activity, meaning undesirable bacterial species don't have the essential iron that is needed for survival.[18]

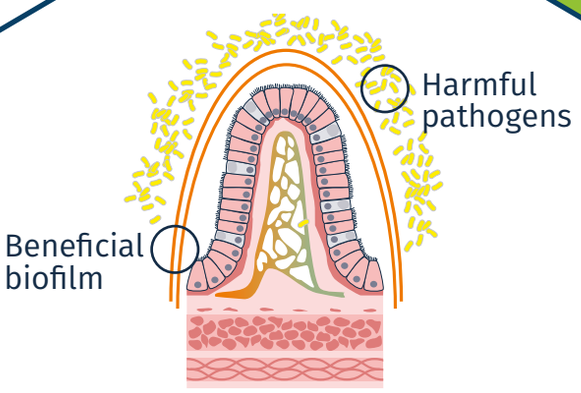
Solutions to support Intestinal Integrity

Targeted to where it is needed

The *Bacillus* species in GALLIPRO® FIT are proven to colonise and protect a healthy proportion of the gut[16]

The *Bacillus* strains in GALLIPRO® FIT have been shown to form a beneficial biofilm in the gut. By successfully colonising and establishing a healthy proportion of the gut microbiome, these strains act precisely where they are needed.

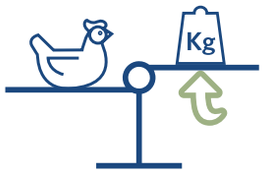
That means they can inhibit undesirable bacteria and optimise nutrient absorption – both key factors that can contribute to improved body weight.[13,16]



For the best outcomes

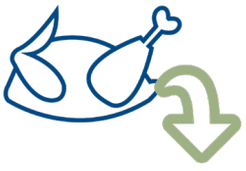
GALLIPRO® FIT can improve productivity in your broiler flock

Under commercial conditions, GALLIPRO® FIT improves several outcomes to maximise performance.



Bodyweight: Improved by 58 g on average[13]

Mortality: reduced by 1% on average[13]



Feed conversion ratio: Reduced by an average of 3 points[19]

Sustainability – a core value

Elanco's long-term commitment

This mindset is embodied by Elanco's 'Healthy Purpose' sustainability approach - a framework of decade-long commitments and actions that are focused on advancing the well-being of animals, people and the planet. As part of this Elanco is leading the way to a sustainable future for poultry producers working with Blonk, a leading international expert in food system sustainability to develop lifecycle assessments (LCA) to calculate and analyse the environmental impacts of our products.

Social

Effective coccidiosis management results in:

Reduction in secondary diseases including necrotic enteritis due to overgrowth of *Clostridium Perfringens*[8]

Better bird welfare; less breast blister and dry litter[20]

Less zoonotic diseases[7,20]

A reduction in antibiotic usage[7,8]

Environmental

Good coccidiosis management saves up to:[21]

6% feed

6% water

6% space

At EU levels, this is the equivalent to the carbon footprint of 14 cars/year[9]

Economic

Poor coccidiosis control has a negative economic impact, due to **increases** in:

FCR

Feed costs

Mortality

Days to slaughter

It also prevents more birds being placed per square metre[22]

Sustainability – a core value

Elanco Hemicell™-XT

1 KG = 1.8 KG CO_2EQ

The carbon footprint of 1 kg Hemicell™ XT is 1.8 kg CO_2 eq.[23]

1 KG = ~ 3.3 KG CO2EQ

1 kg of Chicken has carbon footprint = ~3.3 kg CO2eq. Compound feed contributes ~70% of the total carbon footprint of chicken sold at the supermarket, therefore any reduction in footprint of compound feed has a significant impact on the final meat product. This will need a series of incremental improvements. Hemicell™ XT is one such improvement.[23]

2.7-3.3%

Use of Hemicell™ XT as a feed additive in broiler diets leads to a reduction in carbon footprint ranging from 2.7% to 3.3% (Depending on the growth phase scenario).[23]

Elanco Maxiban™

Elanco Monteban™

Net benefit due to feed efficiency:

Because the inclusion rates of feed additives are relatively low, they do not make up a significant portion of the total footprint of feed. When set against the significant improvements in feed efficiencies from using products like Maxiban™ and Monteban™ there is a very large net benefit in terms of footprint.

Minimal impact on poultry feed:

Both Maxiban™ and Monteban™ contribute less than 0.3% to the overall environmental footprint of a typical European broiler diet, despite their inclusion rates. This minimal impact is due to the relatively small amounts used in feed formulations.

<0.3%
overall environmental footprint

Elanco HTSi

Insight for healthier business decisions

For further information or queries on anything in the Elanco Annual Report, please contact the Elanco team on the following email address:

poultry@elancoah.com

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Elanco UK AH Limited, First Floor, Form 2, Bartley Way, Bartley Wood Business Park, Hook RG27 9XA. Telephone: 01256 353131 Email: elancouk@elanco.com