



General Anticoccidials

Association between Coccidiosis and Dysbacteriosis

Objective

Using Aviapp®, the Huvepharma® health monitoring platform, the association between different *Eimeria* species and the prevalence of dysbacteriosis was investigated.

Set-up

To answer the above objective, lesion scoring data which was logged in Aviapp® from 2018 until 2020 was taken into account. The number of flocks and birds are listed in Table 1.

Table 1 information of the data origins, flocks, and birds included.

Region	# Flocks	# Birds
Europe	4554	33048

The graphs below are depicting the dysbacteriosis scores in function of bird age and the prevalence of different *Eimeria* species. Three interesting patterns are highlighted in this bulletin. The evolution of dysbacteriosis with age in absence of any coccidiosis lesion, in presence of *E. maxima* lesions and in presence of *E. maxima* and *E. acervulina* lesions. A locally estimated scatterplot smoother (loess) curve, which can be seen as a locally weighted average, was used to evaluate the trend in the data.

Results

In the absence of any *Eimeria* challenge the dysbacteriosis score evolves with the age of the birds, meaning that older birds will on average have a higher dysbacteriosis score (left graph, figure 1). In the presence of *Eimeria* lesions, this pattern is altered: presence of *E. maxima* increases the dysbacteriosis scores, especially at younger ages (middle graph, figure 1). In birds with coinciding lesions of *E. acervulina* and *E. maxima*, the impact on dysbacteriosis is even higher (right graph, figure 1). In general, the presence of *Eimeria* lesions have a negative impact on the severity of the dysbacteriosis scores. It is generally accepted that poor coccidiosis control is a triggering factor for intestinal problems and this association is clearly demonstrated.

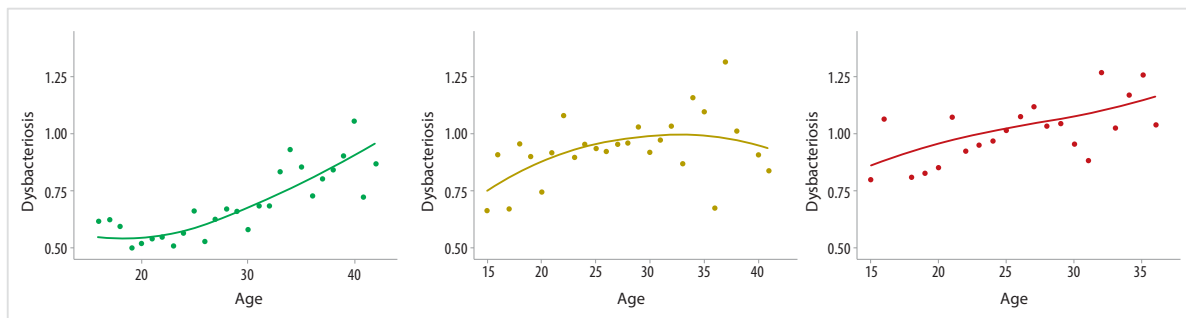


Figure 1: From left to right: dysbacteriosis in function of age in absence of *Eimeria* lesions (green), in presence of *E. maxima* lesions (yellow) and presence of *E. maxima* and *E. acervulina* lesions (red)

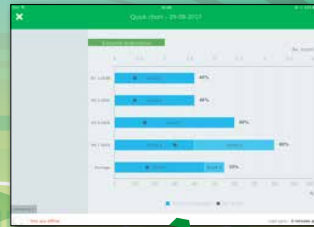
Conclusions

Data from the Aviapp® platform demonstrate a clear link between coccidiosis and dysbacteriosis. Especially the presence of both *E. maxima* and *E. acervulina* result in higher dysbacteriosis scores.

1

DATA ENTRY

- 47 health parameters
- Scoring parameters with illustration
- Available Off-line - anywhere, anytime
- add your performance data
- add multiple users



2

INSTANT INFORMATION AVAILABLE

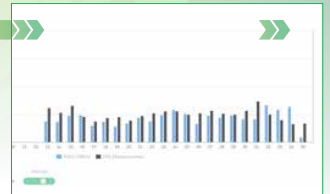
- Average score
- % prevalence
- Overview per flock or per day

3

COMPARE AND MAKE DECISIONS

- Health and Performance data
- different complexes within your business
- benchmark yourself with the industry

Compare with others → BENCHMARK



AviApp for data capture and visual analysis of poultry performance.

Aviapp helps poultry integrators capture and combine data in one easy to use program.

Easy data entry from the field is transformed into meaningful information and visuals at the press of a button, allowing you to make informed decisions that will benefit flock and company performance.



AgriHealth field support and training to help improve NZ broiler chicken performance

Learn about benefits of consistently and routinely scoring sentinel birds for coccidiosis, dysbacteriosis, footpads, and other AviApp parameters.

FootPad Dermatitis scoring in practice

score 0 NO LESION

score 1 MILD LESION

score 2 SEVERE LESION

Footpad Dermatitis in broiler chickens

Footpad Dermatitis (FPD) has become an increasingly important factor in bird welfare and productivity. The footpad lesion score and can be used as a management tool to monitor footpad dermatitis on broiler farms. We have increased the prevalence of FPD to optimal line quality should be maintained throughout the year.

Interpretation of results

The integration of two following areas is considered when scoring Footpad Dermatitis (FPD):

- Prevalence = % of birds that show presence of FPD
- Severity = extent of FPD lesion

The Swedish system uses the score of 0 to 2 as a pass, while other European countries use 0 to 1 as a pass. Also 20% or more feet scoring 2 is also a trigger point.

Integrator A	Integrator B	Footpad Dermatitis Score (0-2)	Score
0	0	0	0
0	1	1	1
1	1	2	2
2	2	3	3
3	3	4	4

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Lesion scoring in practice

score 1

score 2

score 3

score 4

Total Mean Lesion Score (MLS)

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Bacterial Enteritis scoring in practice

Score 0

Score 1

Gut Ballooning

Entire Gut

Inflammation

Caecal & Caudal

Flaccid

Caecal & Caudal

Abnormal Contents

Caecal & Caudal

Thickness

Caecal & Caudal

Undigested Feed

Hind Gut

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Ask the AgriHealth team to train and support your livestock officers to objectively monitor poultry gut health and other performance parameters. For more information contact paul@agrihealth.co.nz or gregor@agrihealth.co.nz