



The main causes for condemnations of broiler carcasses at meat inspection in Finland and the variation of their prevalence

Kristiina Törmä¹, Eija Kaukonen², Janne Lundén², Maria Fredriksson-Ahomaa², Riikka Laukkanen-Ninios^{1,2}

¹Finnish Food Authority;

²Faculty of Veterinary Medicine, University of Helsinki

RIBMINS online conference

October 15th—16th, 2020





Background and aims of the study

☐ Meat inspection data

- A source of information about health and welfare of broilers
- Comparability of the data can be problematic if differences in organization of meat inspection or collection of data (Huneau-Salaün et al., 2015)

☐ Aims of the study was to elucidate

- The significance of meat inspection data for assessing broilers' health and welfare
 - ❖ the main causes for condemnations of whole carcasses
 - ❖ the variation in prevalence of condemnations
- The comparability of the meat inspection data
 - ❖ the differences between the slaughterhouses.





Materials and methods

- ❑ Meat inspection data (2015-2019) from four Finnish broiler slaughterhouses (A–D)
 - Source: Finnish Food Authority

- ❑ Testing the annual differences of condemnations between the slaughterhouses with the Independent-Samples Kruskal-Wallis Test and the pairwise tests with the Dunn's post hoc test with Bonferroni correction (IBM SPSS Statistics 25)

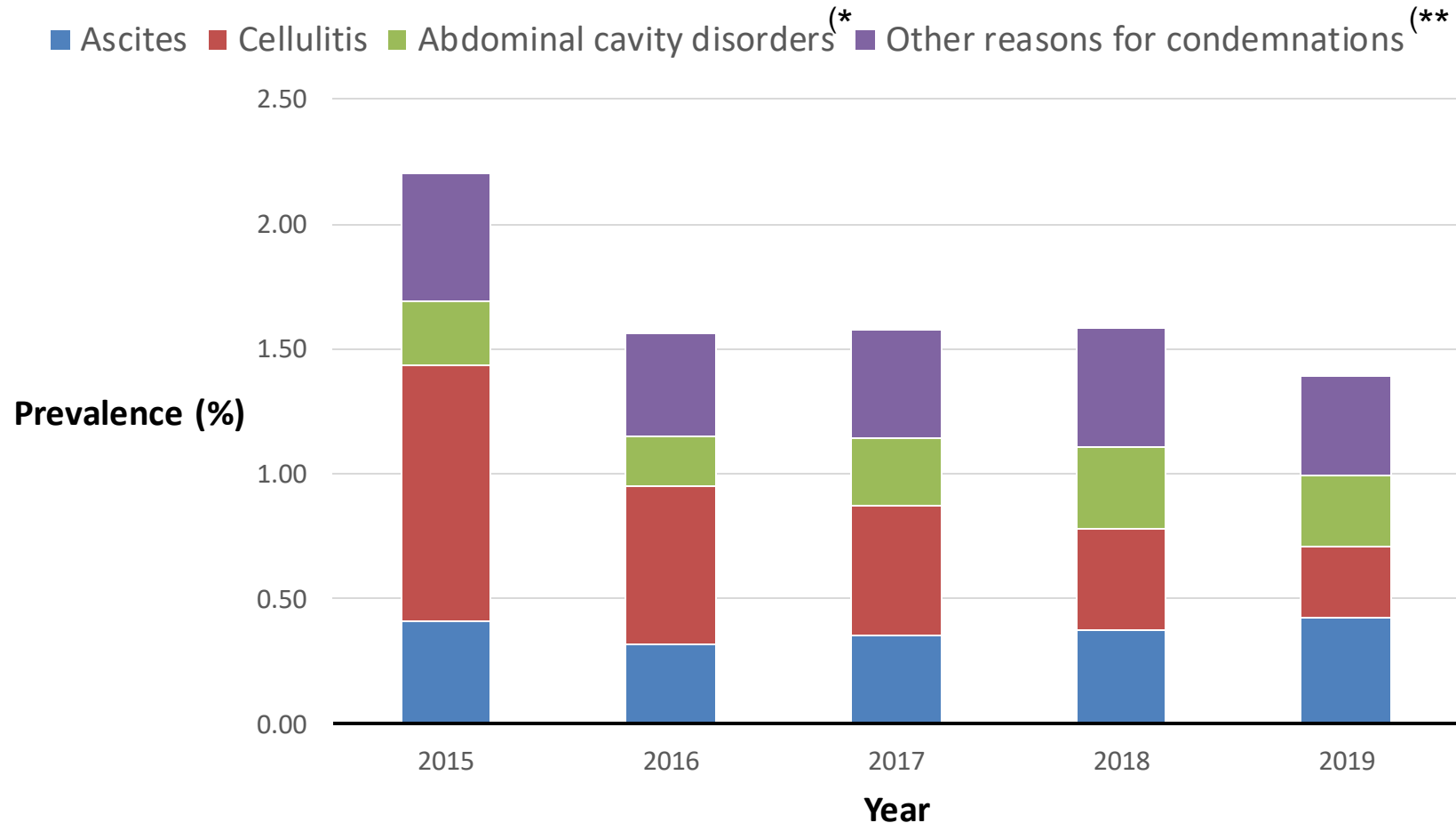


Broiler slaughterhouses in Finland





Figure 1. The annual total prevalence of the condemnations and the main causes for the condemnations of whole carcasses at meat inspection in Finland 2015-2019



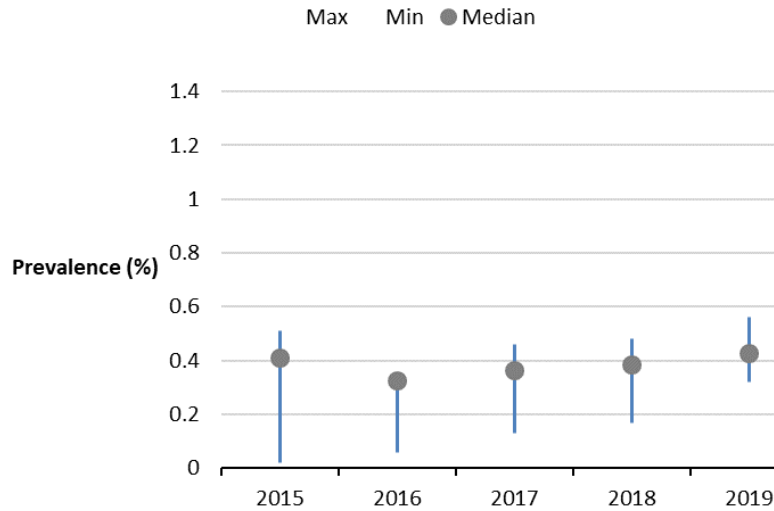
(* including findings such as peritonitis, focal hepatic necrosis, yolk on abdominal cavity etc.
(** Including condemnations of carcasses due to dermatitis, emaciation, bruises and other reasons



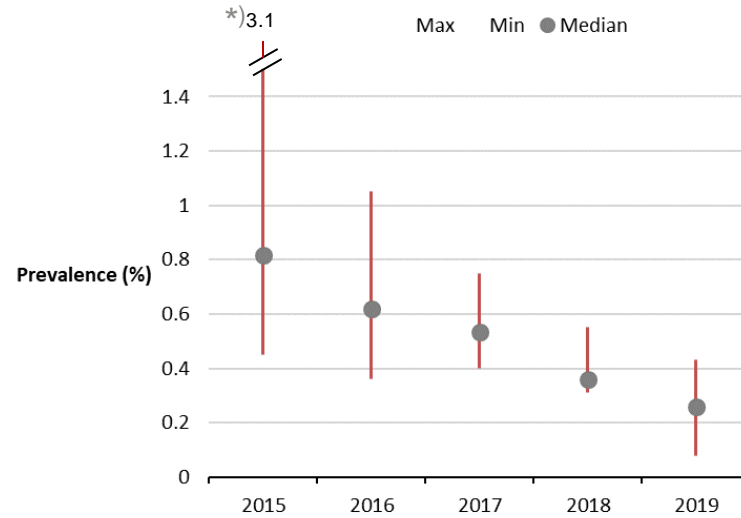


Figure 2. The annual variation in the prevalence of the main condemnation causes in the broiler slaughterhouses in Finland.

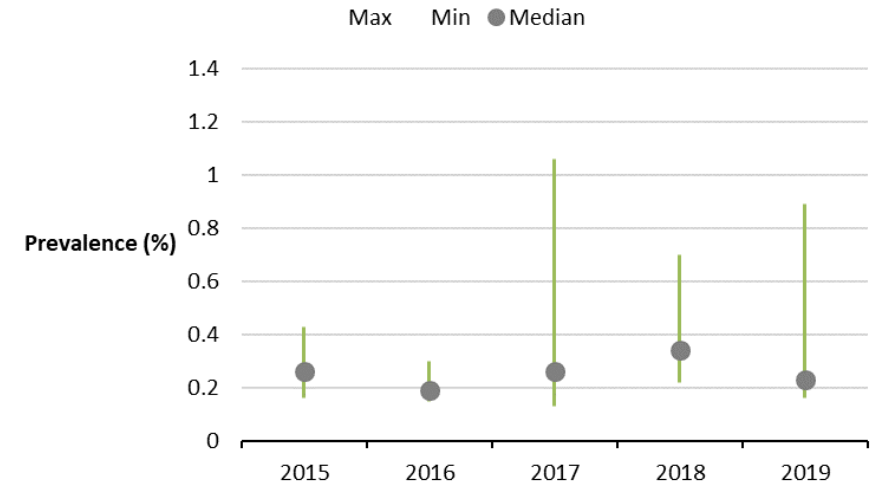
Ascites



Cellulitis



Abdominal cavity disorders



Max= the prevalence in the slaughterhouse with the highest prevalence; Min= the prevalence in the slaughterhouse with the lowest prevalence; Median= the median prevalence

Only the prevalence of ascites differed significantly between the slaughterhouses (P=0.005). Significant differences were in the slaughterhouse pairs BC and CD.





Conclusions

- ❑ Ascites and cellulitis were the most important single condemnation causes in 2015–2019
- ❑ The prevalence of cellulitis was high in 2015-2016
- ❑ Differences were in the prevalence of the condemnations between the slaughterhouses.





References

- Huneau-Salaün A., Stärk K.D.C., Mateus A., Lupo C., Lindberg A., Le Bouquin-Leneveu S. (2015). Contribution of Meat Inspection to the surveillance of poultry health and welfare in the European Union. *Epidemiol. Infect.*, 143, 2459-2472.
- Julian R.J. (1993). Ascites in poultry. *Avian Pathology*, 22, 419-454.
- Ronco T., Stegger M., Olsen R.H., Sekse C., Nordstoga A.B., Pohjanvirta T., Lilje B. et al. (2017). Spread of avian pathogenic *Escherichia coli* ST117 O78:H4 in Nordic broiler production. *BMC Genomics* 18:13 (doi 10.1186/s12864-016-3415-6).
- Vaillancourt J-P., Barnes H.J. (2008). Coliform Cellulitis (Inflammatory Process). In Saif YM, Fadly A.M., Glisson J.R., McDougal L.R., Nolan L.K., Swayne D.E. (Eds.) *Diseases of Poultry*. 12th Ed. (pp.737-738). Iowa:Blackwell Publishing.



Thank you!