

# Associations between *Campylobacter*-positive flocks and compliance with biosecurity measures given by: Danish Quality Assurance in the Poultry Production (KIK)



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**AIM:** to study possible associations between *Campylobacter* status of flocks and compliance with biosecurity measures at farms given by the Danish Quality Assurance in the Poultry Production (KIK).

**M & M:** The compliance of implementation of biosecurity measures (factors) in KIK such as rodent control, feed-storage and hygiene in each of the houses at each farm is audited once a year by an external party. Audit-data from 2012 were used.

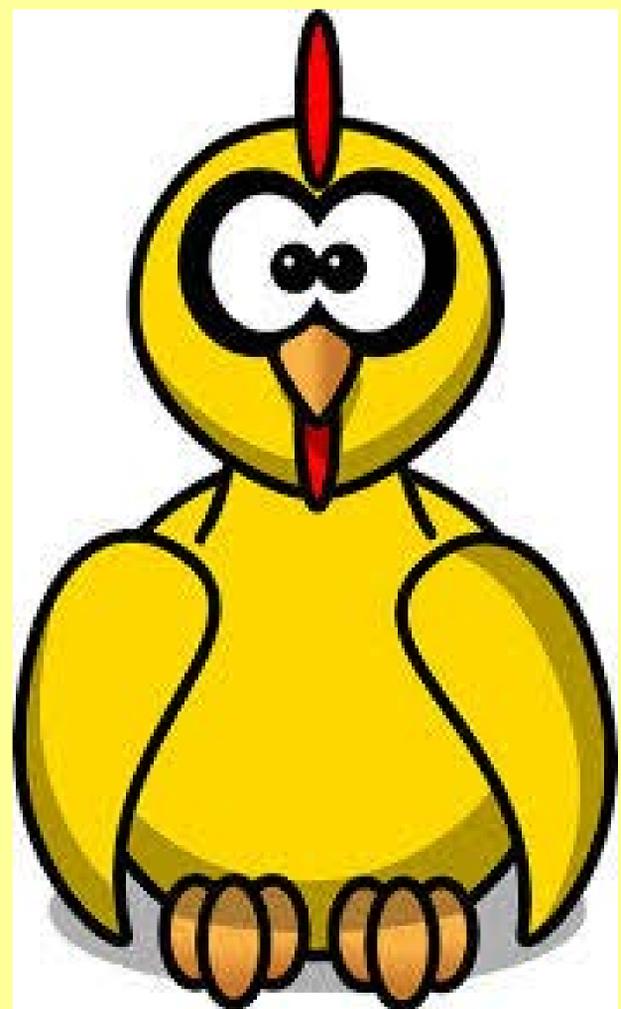
A logistic regression model was applied, with month (1-12) accounting for seasonality and audited-status (before-audit period, 60 days after and more than 60 after) and compliance with biosecurity factors given by KIK (compliance and non-compliance) as explaining variables.

*Campylobacter*-status of flock +/-, based on sock samples results from “Action Plan against *Campylobacter*” = outcome in model.

**RESULT:** Modeling revealed an Odds Ratio (OR) of 1.74 for *Campylobacter* in houses with non-compliance. There were a combination of 6 non-compliant factors that could explain almost all the difference in regard to *Campylobacter*-positive flocks between houses with non-compliance vs. those that complied.

Audited houses, regardless of audit-results, had less *Campylobacter*-positive flocks after audit (OR=0.55).

**FINDINGS WILL BE USED:** to motivate producers to reach the target of 20 % reduction of *Campylobacter*-positive flocks in the Danish Action plan against *Campylobacter* in broilers, food and the surrounding environment 2013-2016.



## OTHER MEASURES AND ACTIVITIES IN THE DANISH ACTION PLAN AGAINST *CAMPYLOBACTER* 2013-2016:

- At slaughter-house level, the target for fresh broiler meat is set as a Relative Risk (RR), expressing the risk of acquiring disease where base-level for estimation was data from 2012. Both prevalence and concentration data are taken into consideration based on that meat with high concentration of bacteria constitutes the highest risk. At end of 2016, RR should be 0.5 as opposed to 1 in 2012.
- The plan further includes different “topics of action”, either directly contributing to reduction of *Campylobacter*, or to knowledge-gain about sources and transmission routes eg. :
  - Development of a user-friendly, cheap system for insect-protection to be applied on broiler houses. The system must be accepted by both insurance companies and producers.
  - Economic incentive for uniformity in regard to broiler-size (CV-value).
  - Other sources than broiler meat.
  - Development of an improved source account model.