

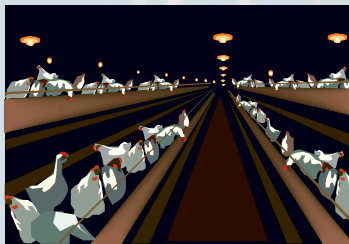


# Optimizing the sampling frame of the Norwegian Action Plan against *Campylobacter* in broilers

The Action Plan includes all broiler flocks slaughtered before 50 days of age. All flocks are tested twice:

## Farm sampling

10 faecal swabs pooled into 2 samples



## Slaughter plant sampling

10 cloacal swabs pooled into 1 sample



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## The objectives were to estimate the optimal

- Number of samples from to be collected pre-slaughter from each flock at farm and at slaughter plant
- Incubation temperature for the collected samples
- Time of pre-slaughter sampling at the farm

## Materials and methods

- An extended number of samples in the existing sampling frame were collected to conduct:
  - ✓ simulation models for estimation of optimal sample size at the farm and the slaughter plant
  - ✓ agreement analyses between samples incubated at 37°C and at 41.1°C
- Action Plan data from 2002-2004 were used in a logistic regression:  $y =$  detection of positive flock,  $x_i =$  season, region, sampling time

## Results/conclusion

- Farm: 3 pooled faecal samples had to be collected in order to increase the flock sensitivity to 94% (89-100%)
- Slaughter plant: 3 pooled cloacal samples had to be collected in order to increase the flock sensitivity to 90% (80-100%)
- Optimal incubation temperature was 41.5°C
- *Campylobacter* positive flock:
  - ✓ Summer season; OR = 14.6 - 20.7
  - ✓ Pre-slaughter sampling; OR = 1.13 per day closer to slaughter

The results will be presented in the papers:

•M., Sandberg, Østensvik, Ø., Lien Aunsmo, A., Skjerve, E., Hofshagen, M. 2005. An evaluation of sampling- and culturing methods in the Norwegian Action Plan against *Campylobacter* in broilers. International journal of Food Microbiology. In press.

•M., Sandberg, Hofshagen, M., Skjerve, E. 2005. Effect of pre-slaughter sampling-time in the Norwegian Action Plan against *Campylobacter* in broilers. Manuscript.