

Is risk categorisation of poultry abattoirs on the basis of the current process hygiene criteria possible?

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Introduction

- Risk categorisation of abattoirs is component of risk-based poultry meat safety assurance system
- Poultry abattoirs can be ranked using the process hygiene criteria (PHC) for *Salmonella* spp. and *Campylobacter* spp. (Regulation EC 2073/2005)
- Aim: to investigate whether regulatory limits for the two pathogens on chilled broiler carcasses are useful in risk categorisation of poultry abattoirs

Materials and Methods

Abattoirs

4 poultry abattoirs: 2 industrial (A & B) and 2 small scale (C & D) assessed

Sampling

50 samples (neck skins of 150 broilers) per abattoir sampled over two days

Microbiological analysis

- *Salmonella* presence (ISO 6579-1:2017)
- *Campylobacter* counts (ISO 10272-2:2017)

Results interpretation

- Compliance of *Salmonella*: n=50, c=5; m= not detected in 25g of a pooled sample of neck skin)
- Compliance of *Campylobacter*: n=50, c=15; m=1000 CFU/g

Results

Abattoirs – day 1	A	B	C	D
Salmonella (number positive out of 25 pooled samples)	14	16	2	10
Salmonella category	unsatisfactory	unsatisfactory	satisfactory	unsatisfactory
Campylobacter (number out of 25 pooled samples with >1000 CFU/g)	14	25	13	25
Campylobacter category	unsatisfactory	unsatisfactory	unsatisfactory	unsatisfactory
RISK CATEGORY	High risk	High risk	?	High risk
Abattoirs – day 2	A	B	C	D
Salmonella (number positive out of 25 pooled samples)	2	3	0	24
Salmonella category	satisfactory	unsatisfactory	satisfactory	unsatisfactory
Campylobacter (number out of 25 pooled samples with >1000 CFU/g)	25	24	0	0
Campylobacter category	unsatisfactory	unsatisfactory	satisfactory	satisfactory
RISK CATEGORY	?	High risk	Low risk	?
Abattoirs – both days	A	B	C	D
Salmonella (number positive out of 50 pooled samples)	16	19	2	34
Salmonella category	unsatisfactory	unsatisfactory	satisfactory	unsatisfactory
Campylobacter (number out of 50 pooled samples with >1000 CFU/g)	39	49	13	25
Campylobacter category	unsatisfactory	unsatisfactory	satisfactory	unsatisfactory
RISK CATEGORY	High risk	High risk	Low risk	High risk

Concluding remarks

- *Salmonella* presence and *Campylobacter* level on carcasses are more dependent on sampling day and on incoming presence/level of pathogens, than associated with a level of process hygiene
- The current PHC does not allow proper risk categorisation of poultry abattoirs
- Investigation of other means of risk categorisation is necessary.