



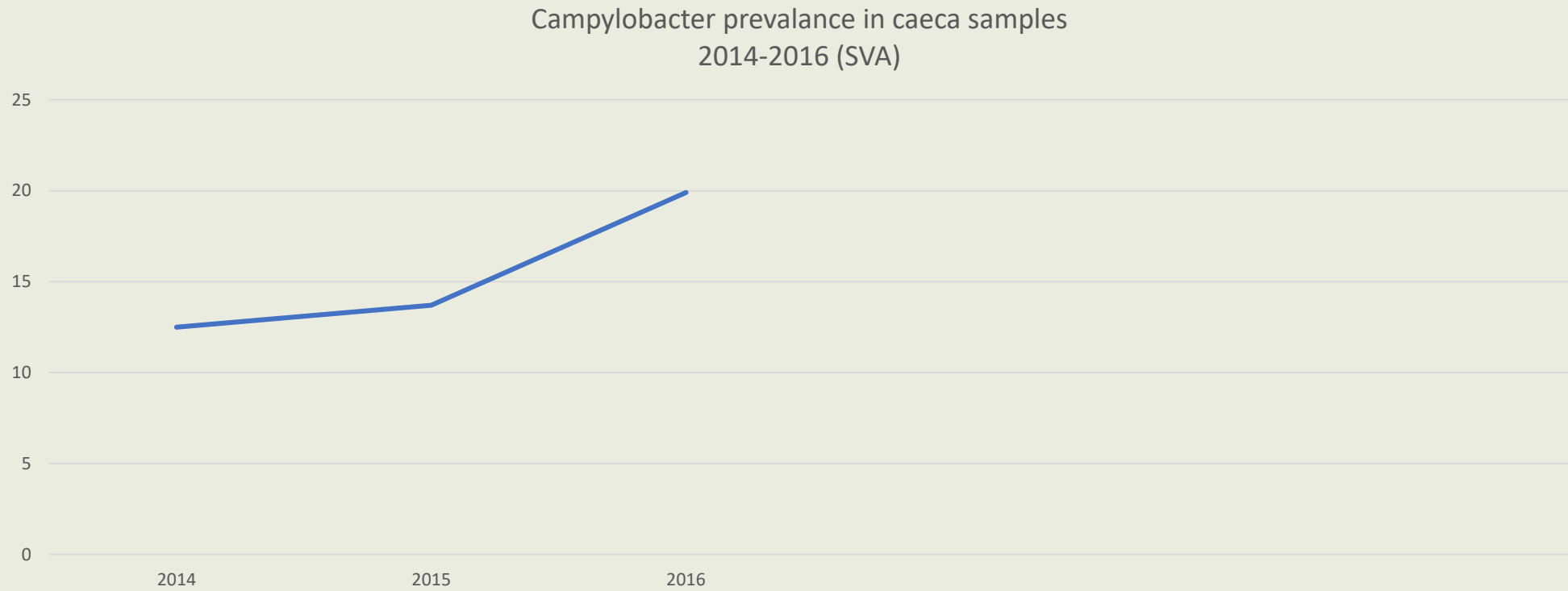
Combating Campylobacter.  
How Do We Do it in Sweden?

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# Campylobacter prevalence 2014-2016

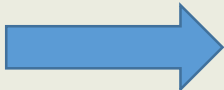
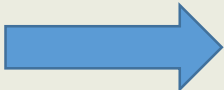
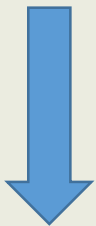


# Find the culprits





# The spread

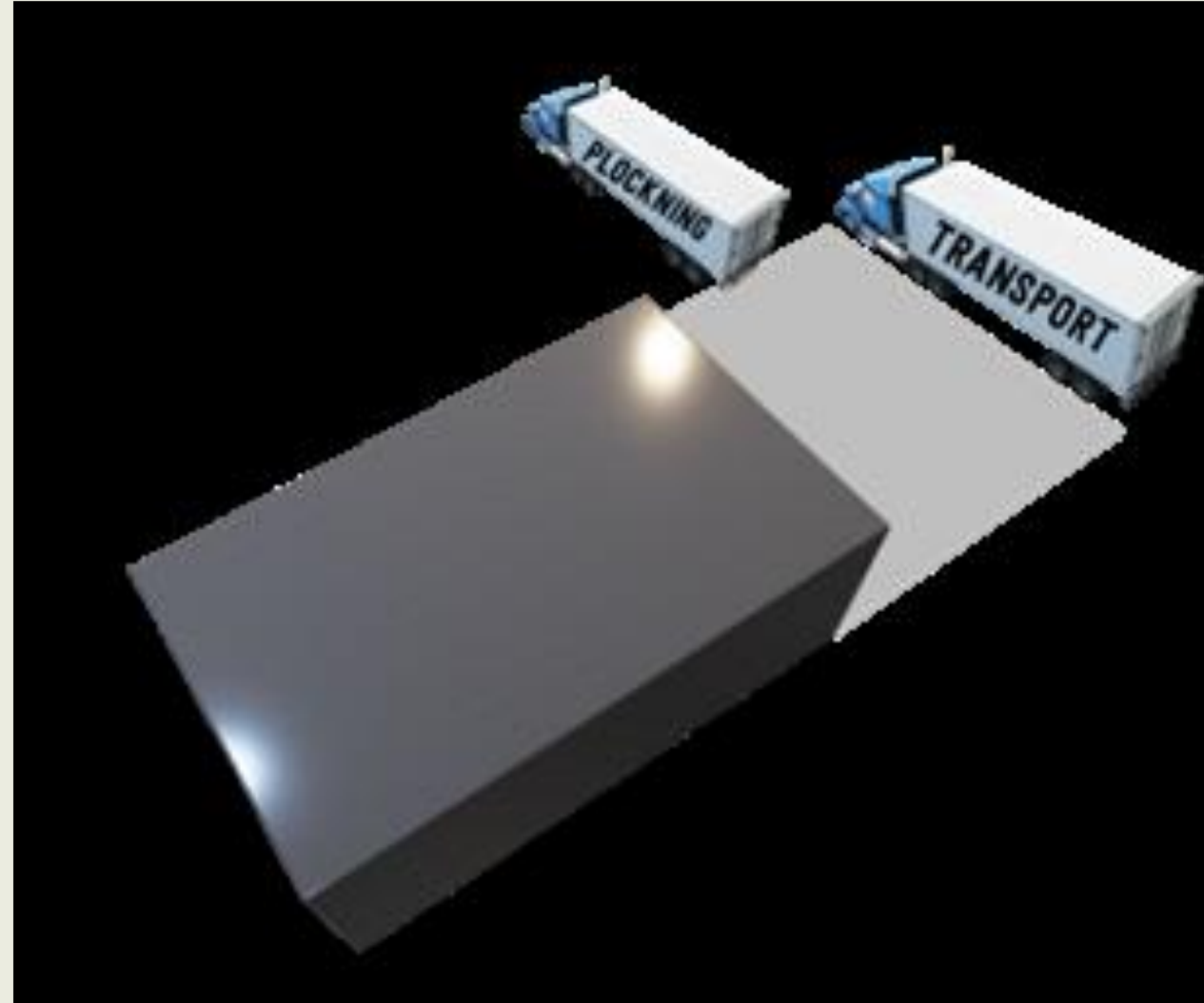


# On farm investigations

- Identify the source
- Cattle
- Water treatment (chlorination, UV- filter)
- Improved biosecurity



# Thinning





# Thinning

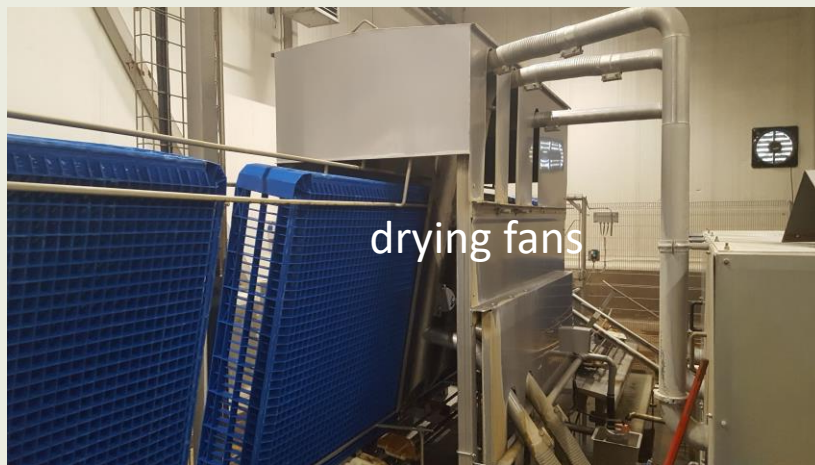


Cleaning and disinfection of  
transportation crates.





# Layout of cleaning process





# Project's results

Trial	Description of trial	<i>Enterobacteriaceae</i>	
		Reduction	SD
A	Sodium hypochlorite 0.5% (v/)	1.6	1.3
B	Peracetic acid 0.5 % (v/v)	1.6	1.0
C	Dehumidifier 2 h, without disinfectant	1.7	1.5
D	Dehumidifier 2 h, sodium hypochlorite 0.5% (v/v)	3.8	1.2

Table 3. Log reduction (mean and standard deviation (SD)) in *Enterobacteriaceae* counts in swab samples taken from chicken transport crates before and after the cleaning process in trials A-D



# C&D of frames





# The relapse



# C&D of barn

## Best practice

1. Remove litter
2. Blow dust of fans, air inlets etc.
3. Sweep the floor to remove as much dry material as possible
4. Wash all the surface with high pressure washer using an alkaline detergent
5. A final rinse
6. Fill water lines with an acid detergent
7. Ocular inspection. Redo if necessary.
8. Let the barn dry
9. Disinfect
10. Evaluate the result by taking samples





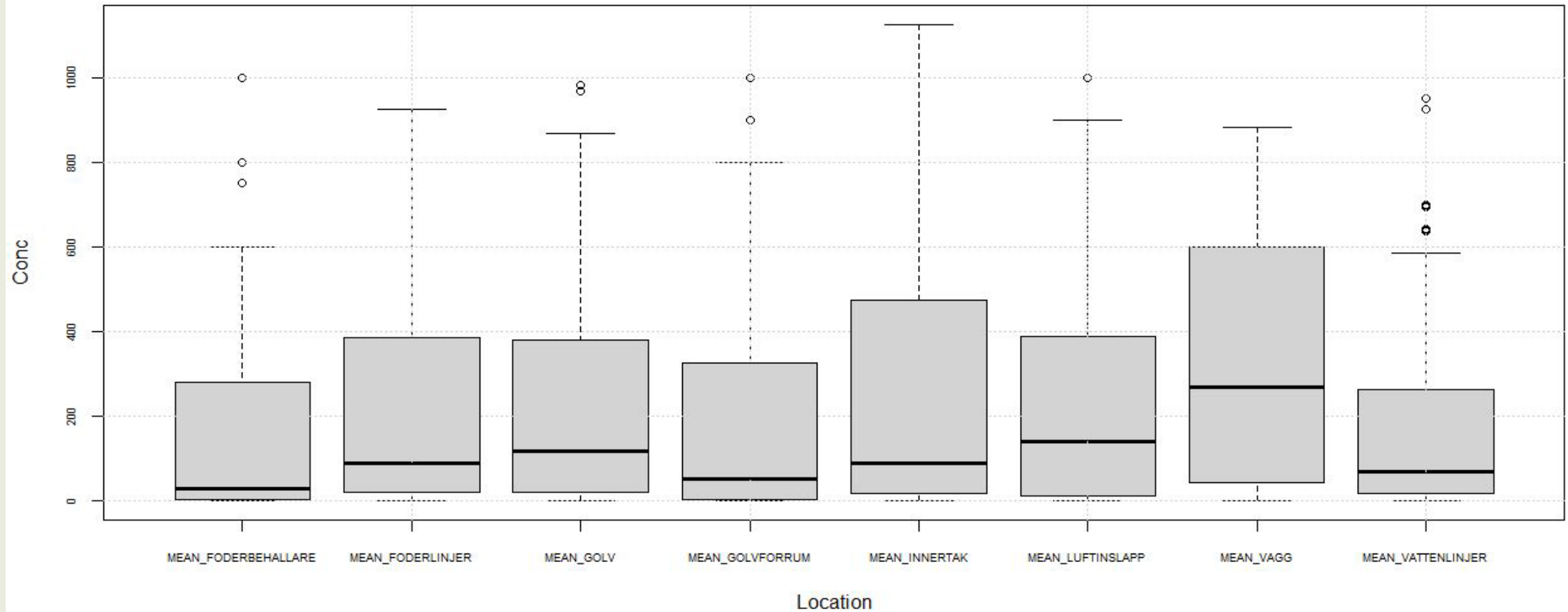
$$20 \times 18 \times 4(5) = 1540$$





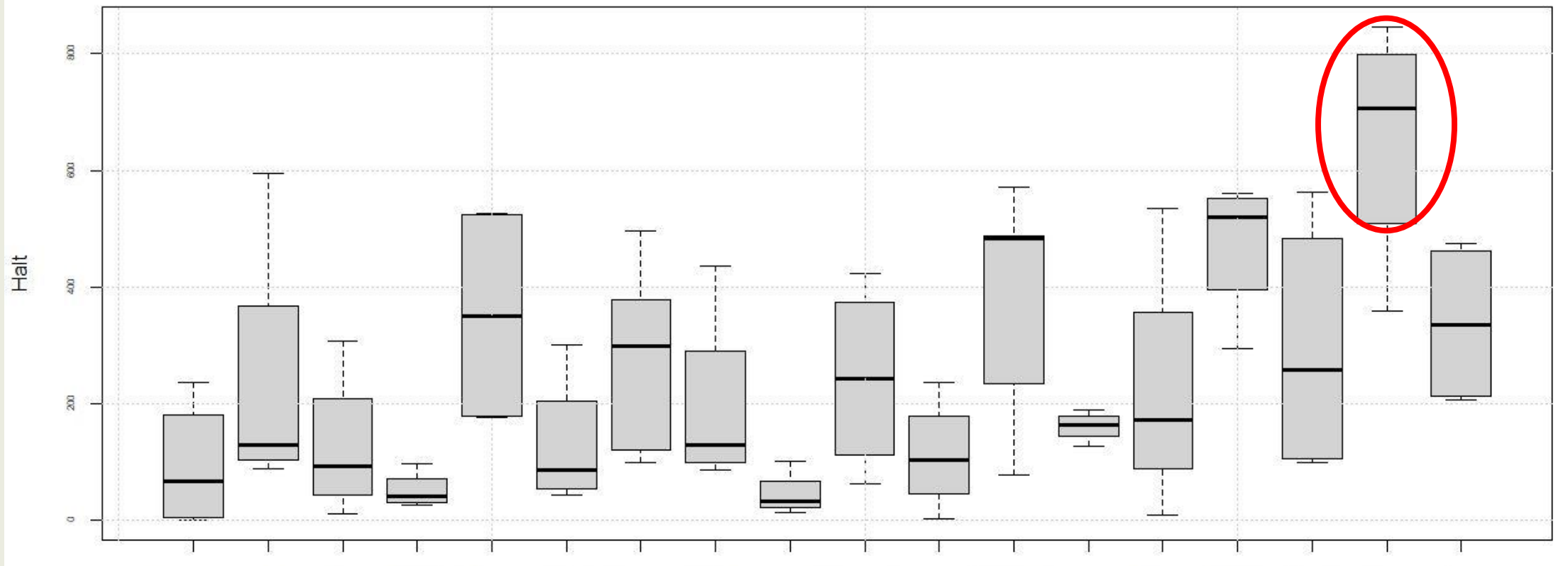
# C&D of poultry barn

## TVC for all samples per sampling point



# C&D of poultry barn

## TVC for all sampling points per farm



# Disinfection of barns

## Comparison of 4 disinfectants

Before



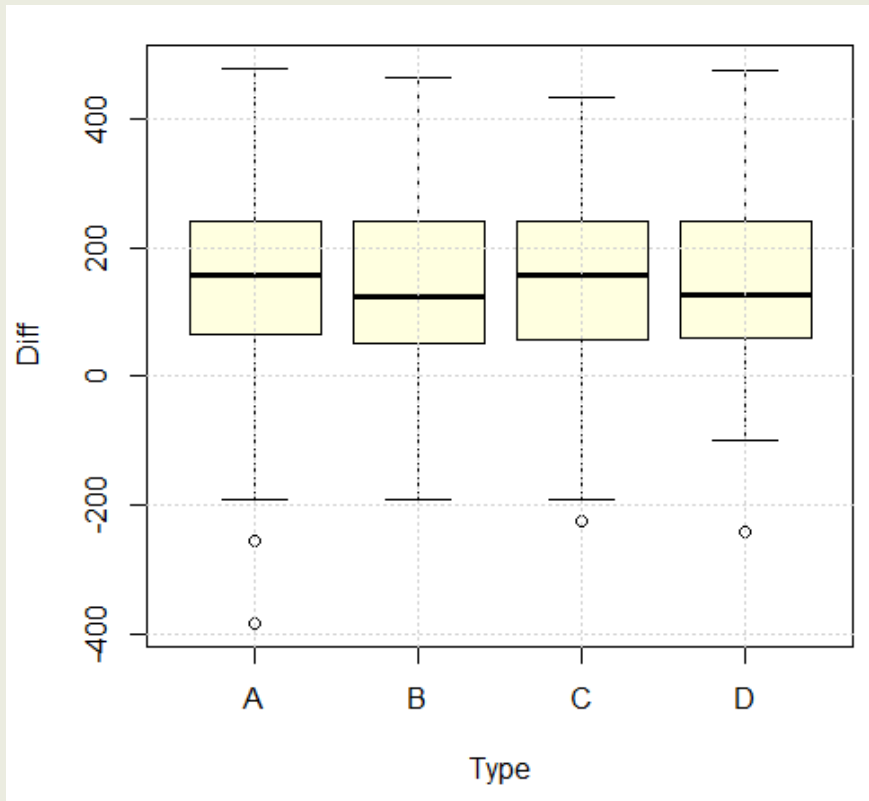
After





# Disinfection of barns

## Comparison of 4 disinfectants



All the tested products reduced bacterial load equally.

# Comparison of 4 disinfectants

## Dosage and costs per barn (3,6 m x 17 m x 60 m)

Product	Aktive substance	Concentration (%)	Dosage product(L) /water(L)	Total amount (L)	Price per L (price in EUR excl. VAT)	Price per unit ( in EUR excl. VAT)
A (Agrofix)	hydrogen peroxide	19	5/12	17	15	75
B (PAA EXTRA)	peracetic acid	5	1/25	26	20	20
C (GK DES)	glutaraldehyde	24	7/14	21	10	70
D (Life Clean)	chlorine dioxide	0,2	25/25	50	12	300

# C&D of barns

## Best practice

### Double disinfection

1th foamed disinfectant applicated with pressure washer

2nd fogging (warm or cold)





# Swedish Poultry Association's Campylobacter control programme + slaughter company's reduction in settlement price

- Caeca samples at slaughter – 10 samples per flock at both slaughter occasions
- In case of more than 2 positive samples in the same unit, an action plan specific for the farm must be created
- > 2 positive samples on the same farm result in losing possibility for thinning on that farm

# Company's control programme

- Cotton swabs samples from transportation crates, frames and lorries.
- Samples of the final product (meat) - quantitative analysis.
- SonoSteam. Used only at main slaughter of a flock that has been positive at thinning. Contributes to quality issues for coated products.
- Financial penalty towards the farmer who delivers positive flock ( only if the caeca samples are already positive at thin).

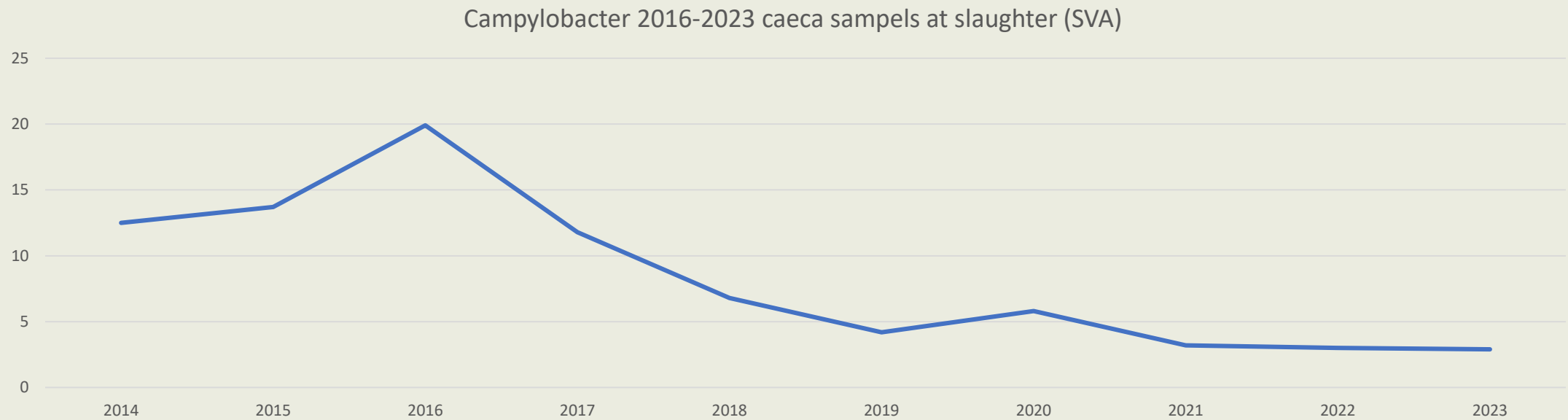
# Preventing the spread of Camp within supply chain

- Limit the sources of Camp
- Prevent the spread of the bacteria with transport equipment
- Prevent the spread via catching crews, catching machines, forklifts, lorries etc.
- Establish specific work routine at thinning
- Protect new flocks from being infected with help of sufficient C&D procedures





# Campylobacter prevalence 2017-2023





Thank you!