



# Contamination level of syringes.

How can we improve the hygiene?

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# We want...

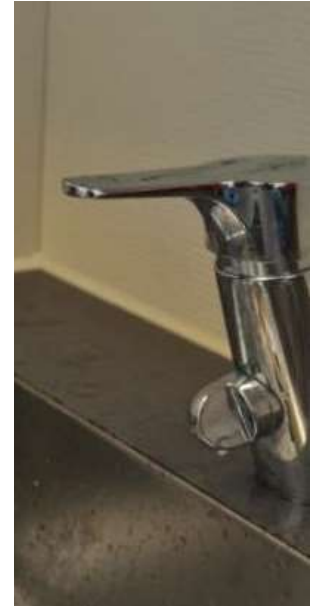


- ▶ Full effect of vaccination



Arsmøde vet-team 12.11.19

# Cleaning of syringes



2.11.19



- ▶ Belgian and Dutch veterinarians from the pharmaceutical company HIPRA have made this experiment.
- ▶ It was presented at the European Pig Congress in May and we have been allowed to show it to you at our annual meeting in Vet-Team.

# Purpose of the study

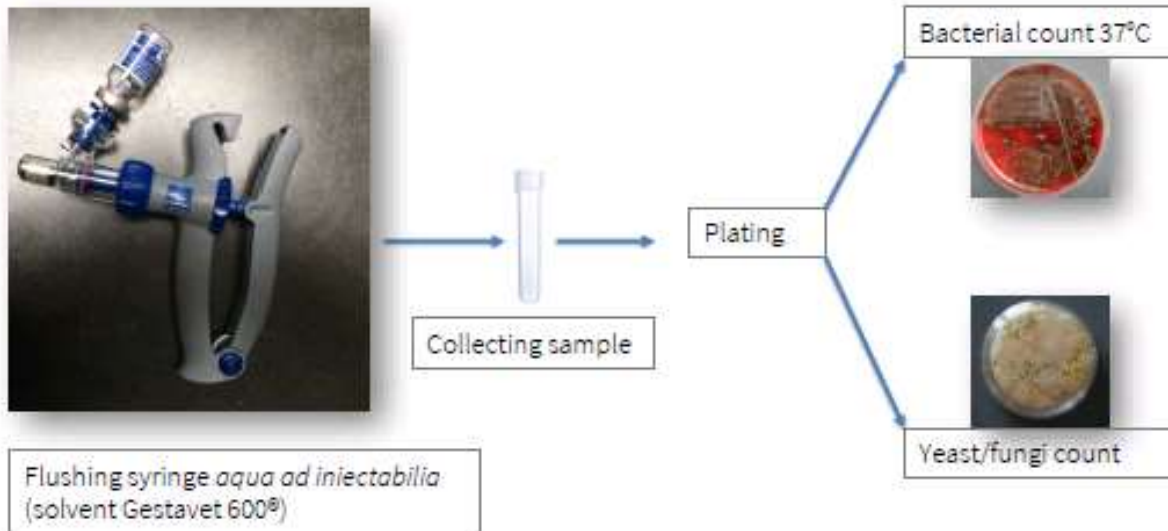


- To investigate the hygiene of syringes used for administration of porcine vaccines in Belgium and the Netherlands
- To identify factors influencing the contamination level of these syringes



## INVESTIGATION SYRINGES

- 5 new syringes
  - 79 syringes used for administration of porcine vaccines
- 51 BE
- 28 NL





## QUESTIONNAIRE

- **Parameters:**

- Animal category: piglets only, gilts + sows, both piglets and gilts + sows
- Use of a fixed prolongator or not
- Rinsing or not
- Preservation syringe in the fridge or not
- Type of syringe:

- ❖ Automatic, disposable syringe



- ❖ Non-disposable syringe



- ❖ Prolonged frame type of syringe





# RESULTS

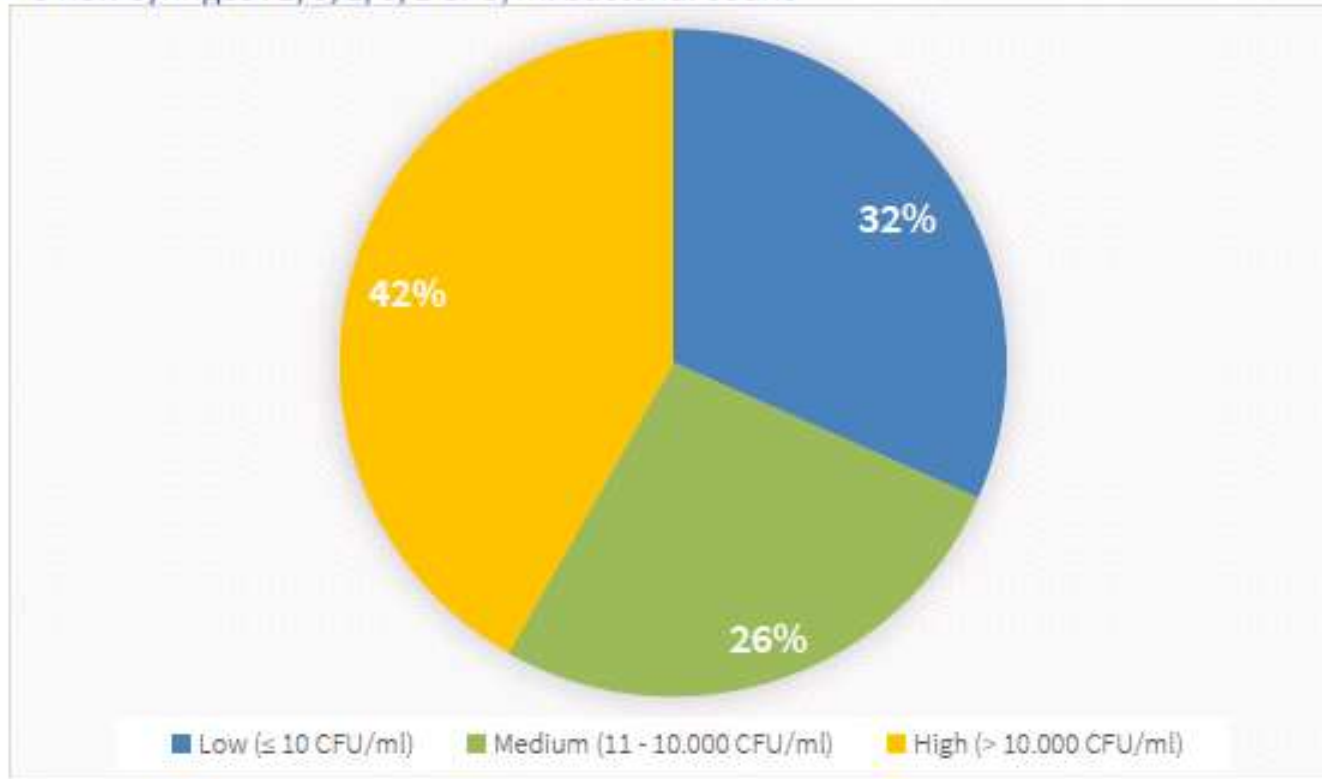
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## DESCRIPTIVES BACTERIAL CONTAMINATION

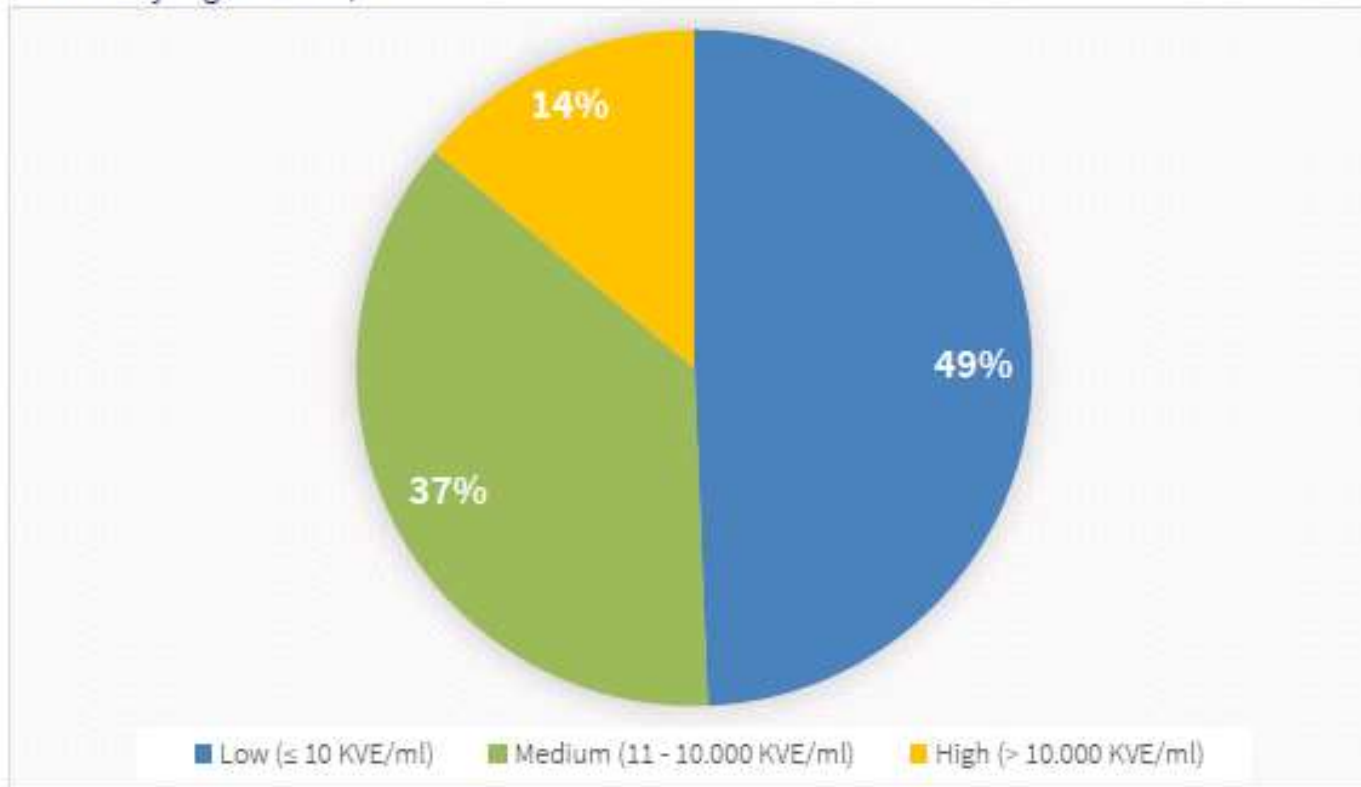
- 5 new syringes : 1, 0, 1, 0, 1 CFU/ml bacterial count





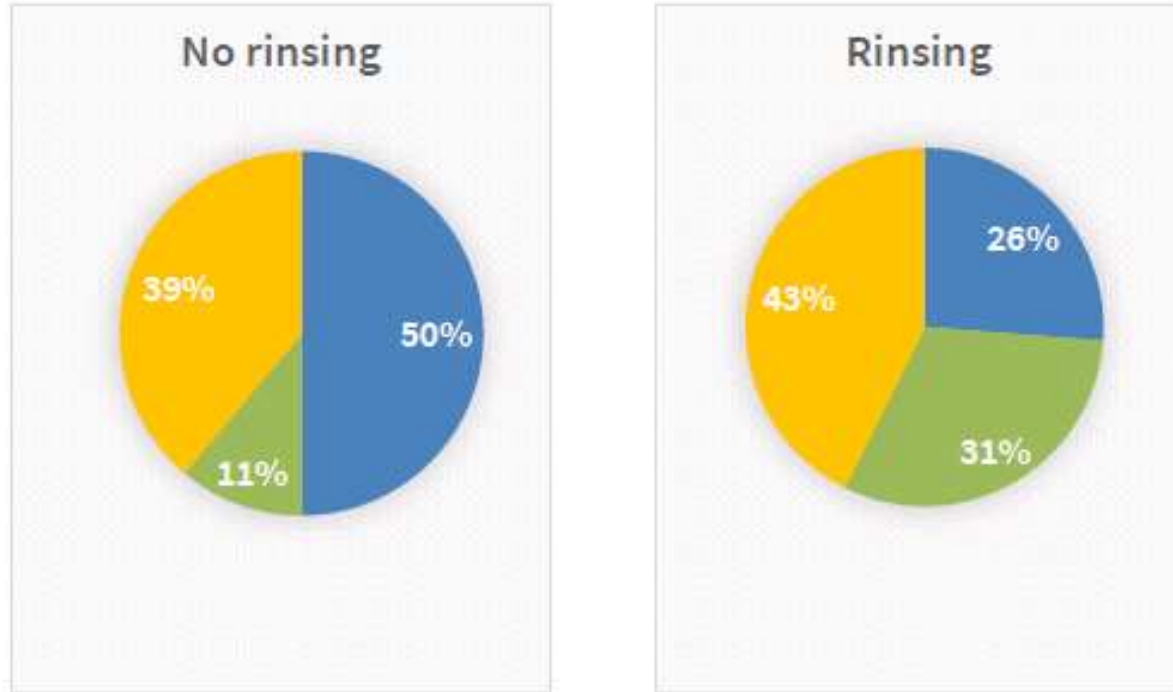
## DESCRIPTIVES FUNGI/YEAST CONTAMINATION

- 5 new syringes : 0 CFU/ml.





## PREDICTORS BACTERIAL CONTAMINATION

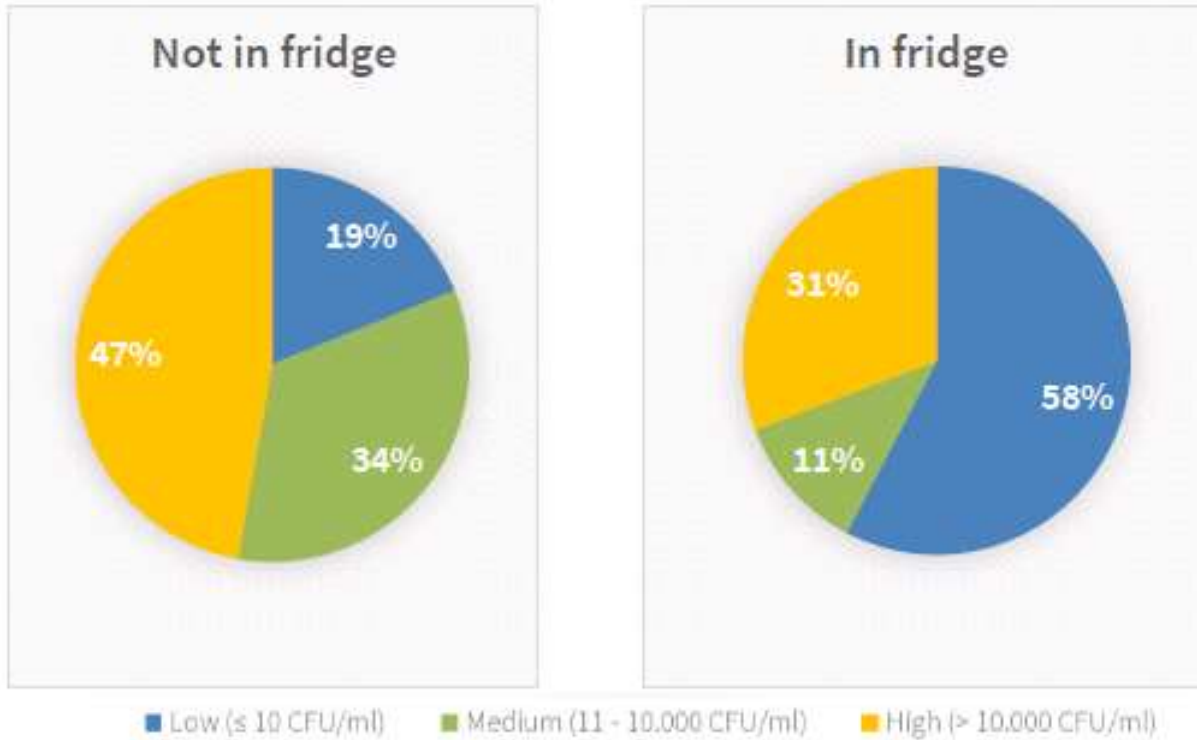


■ Low ( $\leq 10$  CFU/ml) ■ Medium (11 - 10,000 CFU/ml) ■ High ( $> 10,000$  CFU/ml)

P-value: 0.384



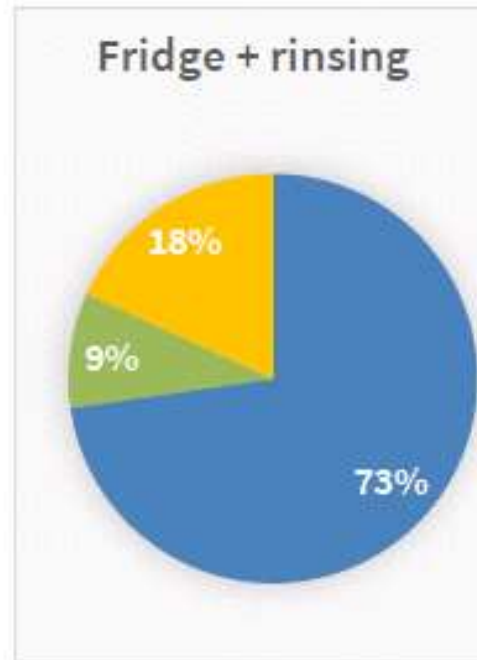
## PREDICTORS BACTERIAL CONTAMINATION



P-value: 0.296



## PREDICTORS BACTERIAL CONTAMINATION

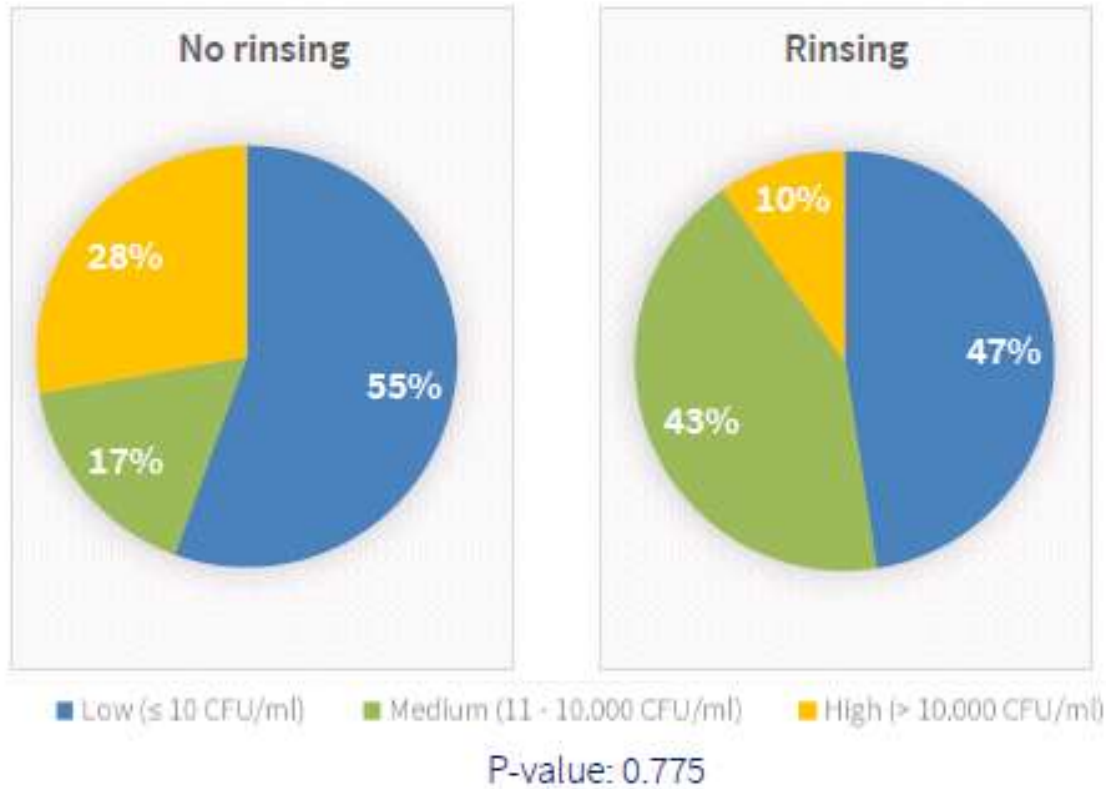


■ Low ( $\leq 10$  CFU/ml) ■ Medium (11 - 10.000 CFU/ml) ■ High ( $> 10.000$  CFU/ml)

P-value: 0.001

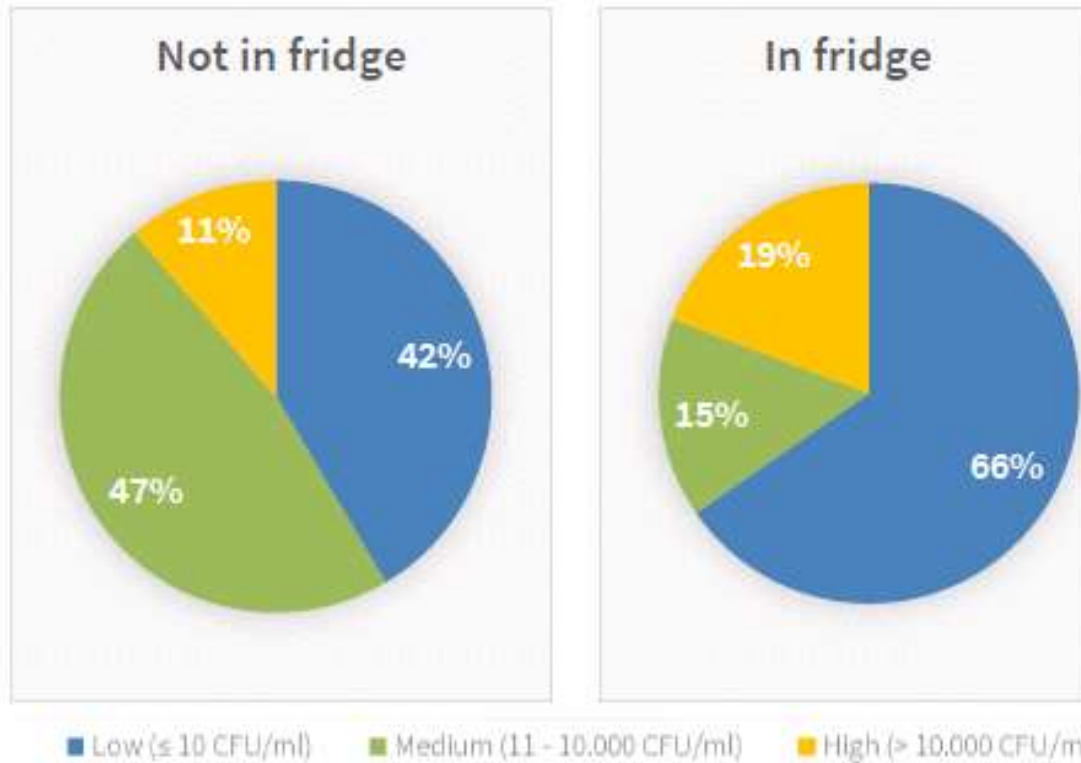


## PREDICTORS YEAST/FUNGI CONTAMINATION





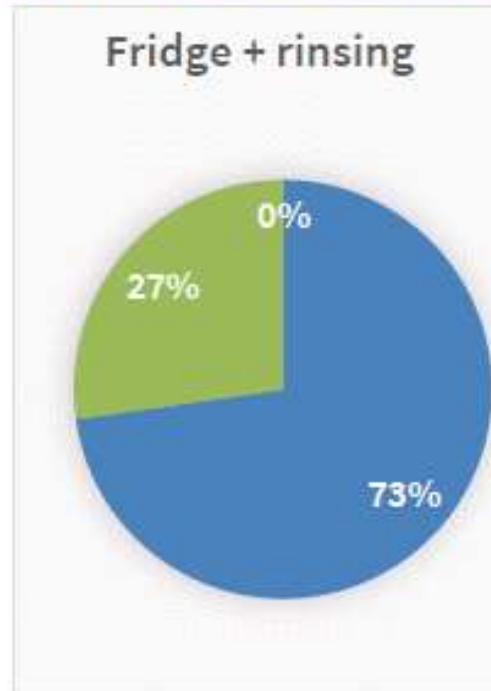
## PREDICTORS YEAST/FUNGI CONTAMINATION



P-value: 0.376



## PREDICTORS YEAST/FUNGI CONTAMINATION



■ Low ( $\leq 10$  CFU/ml) ■ Medium (11 - 10,000 CFU/ml) ■ High ( $> 10,000$  CFU/ml)

P-value: 0.01





- Many syringes were intermediate to highly contaminated

## Conclusion:

- Rinse the syringes in clean water
- Store the syringes in the fridge
- Replace used syringes often

- Syringe contamination: room for improvement!
- Prevention rather than problem solving
- Need for quick detection method on-farm



- ▶ Thank you to HIPRA for allowing us to use the material.
- ▶ Thank you for your attention





► Questions ?



Årsmøde Vet-Team 12.11.19