

IDF Mastitis and Milking Technology Symposium

Sensitivity in bulk tank

S. agalactiae surveillance on
BMT and quarter samples

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SEGES
INNOVATION

This is what I'm going to share

Dynamics of *S. agalactiae*-positive herds at a national level

Surveillance framework in Denmark

Study material and methods

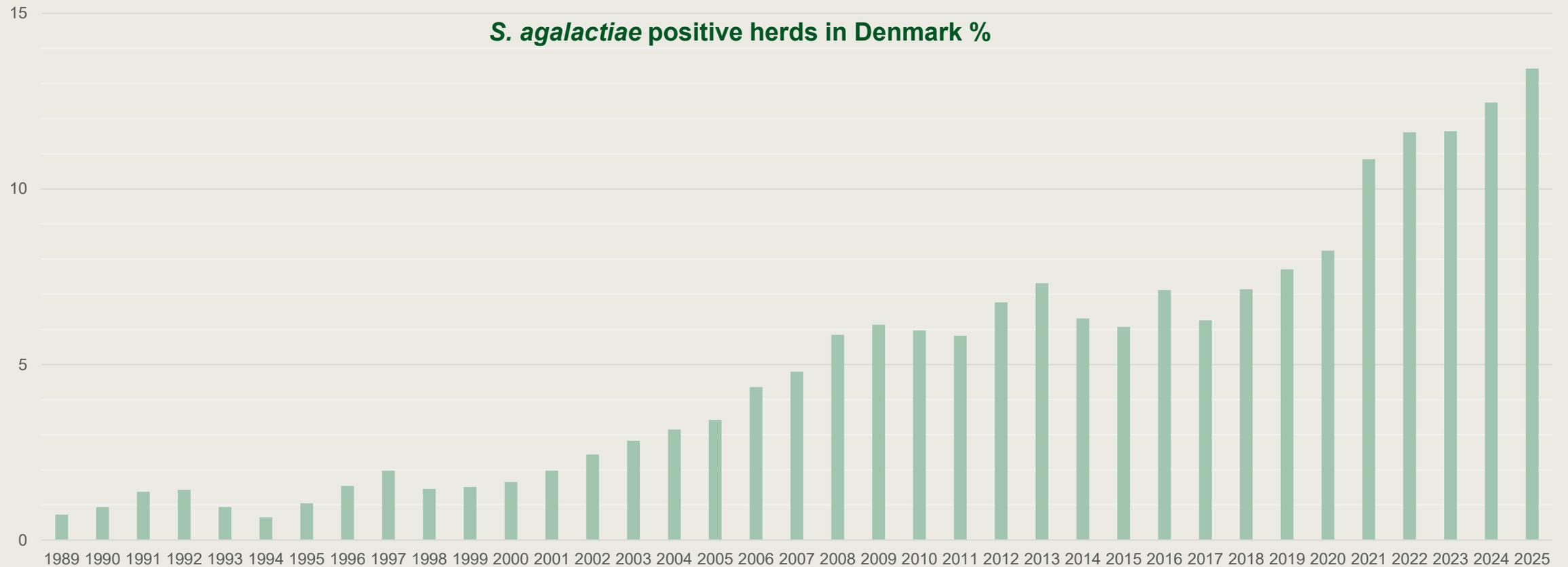
Study population

Sensitivity of Bulk Tank Milk Testing (BTM)

Surveillance Dynamics

Conclusions

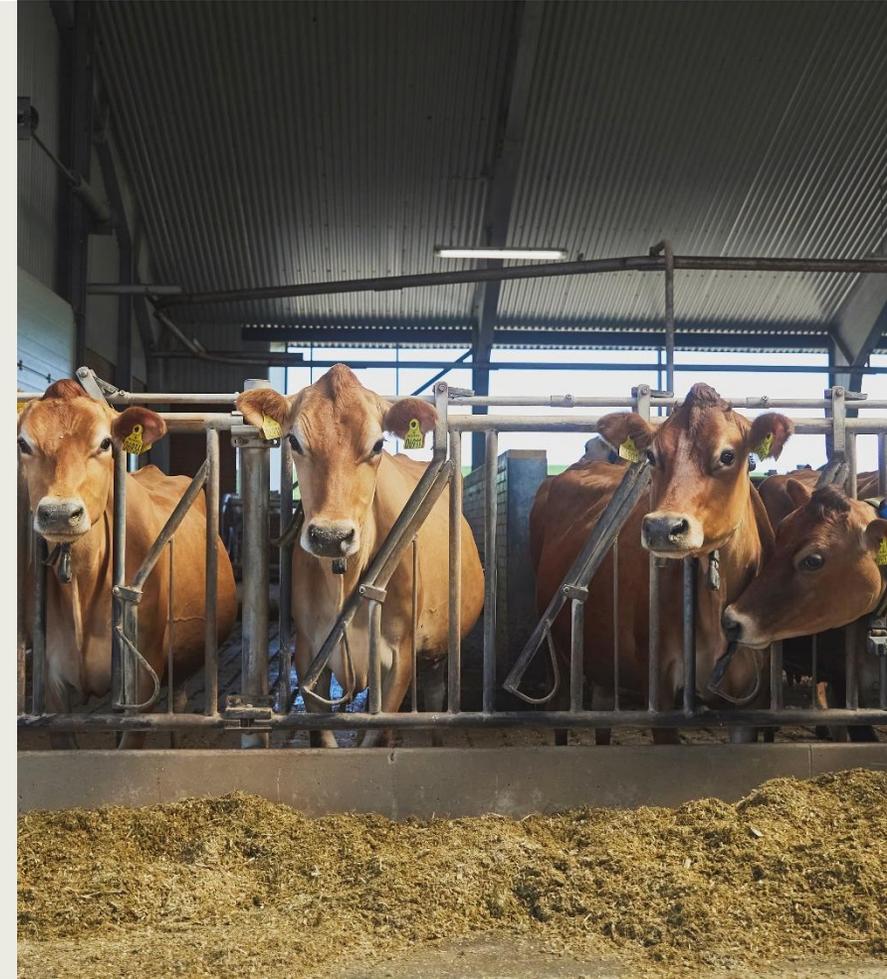
Dynamics of *S. agalactiae*-positive herds at a national level



Surveillance framework in Denmark

The objective is to monitor the status at the herd level

- National mandatory surveillance program
- **Diagnostic tools:**
 - Biannual PCR testing of bulk tank milk (BTM)
 - PCR / bacteriology from individual cow samples
- Herd is considered the epidemiological unit
- Combination of methods expected to improve detection



Material and Methods

- **The data source is the Danish Cattle Database**
- **Study period:** July 2024 – June 2025
- **Inclusion criteria:** BTM and individual samples collected within ± 1 month of the study period
- Individual cow testing mandatory for treatment of clinical mastitis → low selection bias
- Herd-level comparison of BTM vs quarter samples

Study Population

All Danish dairy herds
shipping milk - total
herds included

(n = 2,029)

Herds with comparable
BTM and individual
samples

(n = 739)

Bulk tank milk results:

M-positive herds
(n = 97)

BTM-negative herds
(n = 642)

Individual samples used as reference for herd infection status

Sensitivity of Bulk Tank Milk Testing

Among 642 BTM-negative herds, 16 herds were positive in individual samples

These are classified as false negatives

Estimated BTM sensitivity 85.8%

Likely causes of missed detection:

- Low within-herd prevalence
- Intermittent bacterial shedding

Reflects field performance under routine conditions

Surveillance Dynamics and Conclusions

During the study period, 71 herds changed status to infected

Detection routes

27

via individual cow samples

11

via BTM

Conclusions – take home message

**BTM is
effective for
herd-level
screening**

**Individual
testing
improves
detection at
low prevalence**

**Integrated
surveillance
strengthens
control and
prevention
efforts**



Thanks for your attention!

Questions and comments will be highly appreciated!



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