

WP2

Streptococcus agalactiae – risk factors?

Strep. agalactiae workshop
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10 researchers

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Characteristics of herds with *Strep. Agalactiae* –Risk factors?

- according to vets

- Large farms
- Hygiene (milking and barn)
- Milking system
- Buying animals
- Moving animals
- Large turnover in personnel (milking personnel)
- Close to positive neighbour
- The farmer - Motivation to do something
- **Not necessarily something special!**



Data

- Register data from the Danish Cattle Database
- Retrospective: 12 months period (June 1st 2022 and May 31st 2023)
- *Strep. agalactiae* positive if status positive >150 days within the 12 months period

- Outcome: *Strep. agalactiae* status (positive/negative) "farm level"
- Explanatory variables tested: 23 KPIs from the 12 months period
- KPIs are on DE (herd?) level

KPIs (and other characteristics)

- Year-cows, year-heifers
- Turnover in cows, calvings/year-cow
- Age of living cows, age and milking years at culling, age at calving, DIM
- Number of farms, milking type, organic or not
- Purchase, and from how many
- Taking animals home from shows etc.
- Dry period length, dry off treatment, teat sealant
- Salmonella status

Characteristics of herds with *Strep. agalactiae*

...Compared to herds "free" from *Strep. agalactiae*...

216 of 1845 herds with *Strep. agalactiae* (proportion = 11,7%)

- Larger herds (344 vs 233 year cows)
 - Higher SCC, higher milk yield, several sites (farms), not organic
- Lower milking years at culling (2,9 vs 3,1 years)
 - Lower DIM, lower age and higher culling rate
- No effect of purchase!?
- Farm type (lower proportion of organic farms vs conventional)
- Univariable; correlation between Salmonella and *Strep. agalactiae* status

Characteristics of herds with *Strep. agalactiae*

- Data subset with information on dry-off treatment:
 - 125 of 873 farms (14%) with *Strep. agalactiae*
- Higher frequency of antibiotic treatment at dry-off
 - Samples -> chance of test positive
 - Used as control measurement..
 - As well as culling?



Discussion

- No causality in this study!
 - Risk factor or hard to eradicate?
- Antibiotic treatment at dry-off, and culling:
 - Used as control measurement..






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Retrospective cohort study of management procedures associated with dairy herd-level eradication of *Streptococcus agalactiae* in the Danish surveillance program

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CONCLUSIONS

A higher proportion of culling due to mastitis within 100 d from calving was associated with a higher probability of herd-level recovery from *Strep. agalactiae* in herds with conventional milking systems. Additionally, a higher proportion of mastitis treatments within 250 d postcalving was associated with a higher probability of herd-level recovery from *Strep. agalactiae* in herds with a high bulk milk SCC. The extent of diagnoses relative to the extent of mastitis treatments, the proportion of cows treated for mastitis early in lactation, the proportion of cows treated at dry-off, and the median length of the dry period for cows receiving dry cow treatment was not associated with herd-level recovery from *Strep.*

agalactiae. The results suggest that early culling or lactational treatment of infectious cows may facilitate herd-level eradication of *Strep. agalactiae* in herds with conventional milking systems and a relatively high infection level.

Herd level eradication?

- Motivation to be status “negative”?
- What consequences does it have to be “positive”?

Hvilke konsekvenser oplever I at smitte med B-strep har for landmanden?

21 responses



Plans for farmer-interviews

- To learn from farmers that eradicated within the last year

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Interview guide AP2

Målgruppe: Besætningsejer eller driftsleder i besætning som har skiftet B-streptokok status fra "Smittet" til "Fri" indenfor det seneste år.

Indledende spørgsmål til karakter af besætning ved status-skift (opvarmning):

- Ifølge SEGES har du skiftet status i X måned. Hvis du tænker tilbage til det tidspunkt:
 - Hvor mange malkende køer? Er der sket ændringer i ko-antal i de sidste år?
 - Opdræt?
 - Antal lokationer (ejendomme)?
 - Type af malkeanlæg?
 - Sundhedsrådgivningsaftale?
 - Øko/konv + salmonella (DATABASE)

Spørgsmål til sanering:

- Kan du beskrive hvordan du kom ud af B-strep positiv status / Hvordan tror du at du er lykkedes med at blive fri?
 - Hvis aktiv handling: hvilken test-strategi
 - Behandlingstyper (klinisk og goldbehandling)
 - Udsætning, hygiejne, fodring af kalve
- Hvordan synes du processen har været?
- Hvis du skulle komme med et skøn, hvad tror du det har kostet dig at sanere?
- Hvor længe tror du besætningen havde været smittet forud for sanering?
- Hvor mange dyr tror du var inficeret?
- Hvor har du søgt information og vejledning?

Spørgsmål til motivation for sanering:

- Hvem har taget initiativ til sanering? - Har nogen hjulpet til motivation undervejs?
- Hvad var din motivation for at blive fri?
 - Hvilke betydninger havde det for dig at være smittet?
 - Hvad tror du, at du kan opnå (økonomisk, arbejdsmæssigt mm) ved at være fri?

Spørgsmål til mål for fremtiden:

- Hvad gør du for at forblive i status "Fri"?
 - Hvordan overvåger I B-strep nu/fremadrettet (frekvens, prøve, test)
 - Hvordan forebygger I smitte udefra og internt?
 - Hvilken viden/hjælp har du manglet i forløbet?
 - Hvis du skulle give et godt råd til en kollega smittet med B-streptokok, hvad ville det være?

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