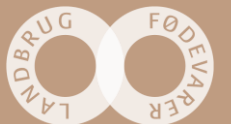


Testing the effect of maternal vaccination against BRSV on calves

Presentation at Nordic Cattle Seminar June 2019

SEGES



Herd status

- Dairy herd with 1400 cows jersey
- High prevalence of early respiratory disease among calves (summer 2018)
- High calf mortality
- Calves in single huts
- Sub optimal routines for colostrum supply
- Sub optimal routines for milk handling and supply

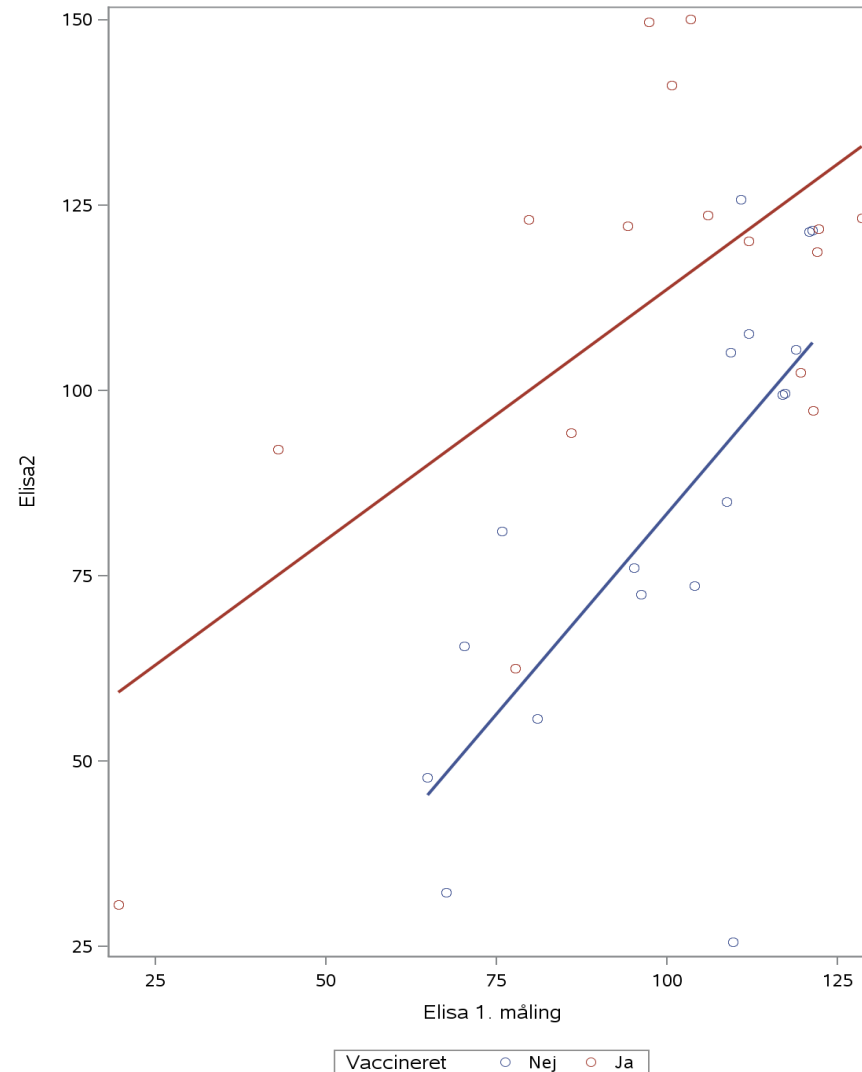
Setup of test

- Every second cow vaccinated with Bovilis Bovipast (August -) at dry off and revaccinated 3-4 weeks later (approximately 100 cows in each group)
- Heifers not included
- Cows tested for BRSV antibodies in serum prior to first vaccination and approximately one week after calving (15 vaccinated cows and 15 cows not vaccinated)
- All colostrum tested on-farm with Brix refractometer – colostrum samples kept in freezer for later analyses
- Calves blood sampled (1-10 days old)
- Colostrum samples tested at lab.
- Serum samples from cows tested at lab.
- Serum samples from calves tested at lab.

Results

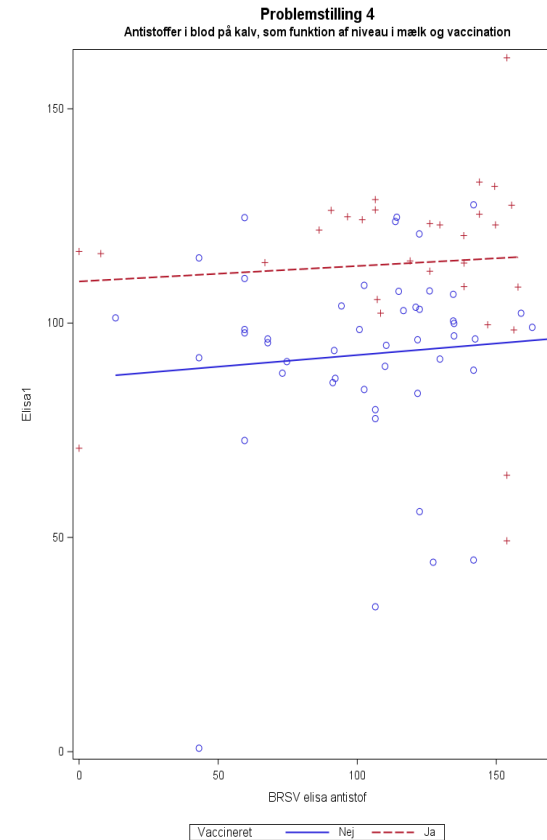
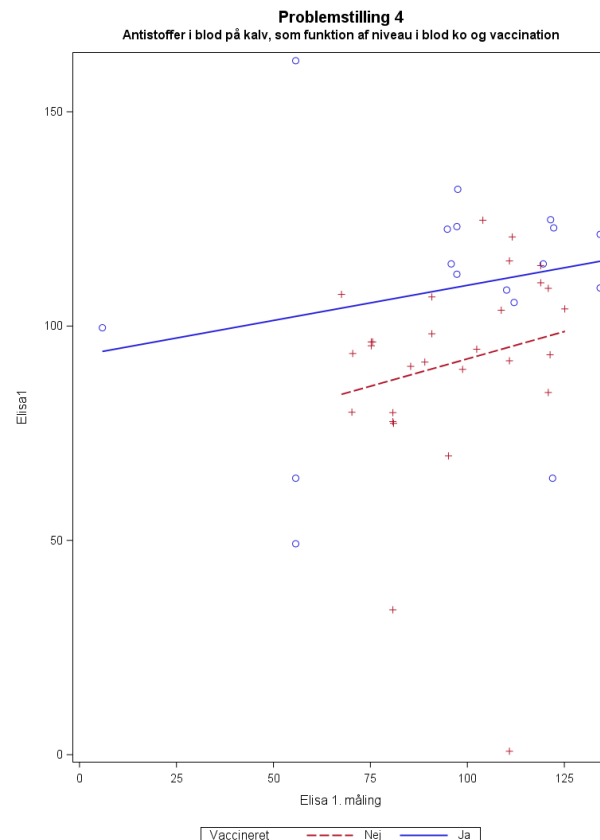
- Vaccinated cows showed significant higher levels of BRSV antibodies after calving compared to non-vaccinated cows ($P=0,0004$)
- Colostrum from vaccinated cows showed slightly higher content of antibodies against BRSV compared to colostrum from non-vaccinated cows ($P=0,09$)
- Calves fed colostrum from vaccinated cows showed significant higher level of BRSV-antibodies compared to calves fed colostrum from non-vaccinated cows ($P<0,0001$)
- No differences in disease treatments or mortality were seen between groups of calves that received colostrum from either vaccinated or non-vaccinated cows
- Colostrum from older cows had higher content of IgG compared to colostrum from younger cows with same Brix value ($P<0,0001$).
- Calves with low serum Brix values showed higher mortality ($P=0.03$).

Levels of BRSV antibodies before and after calving



Vaccinated cows showed significant higher levels of BRSV antibodies after calving compared to non-vaccinated cows ($P=0,0004$)

Calves response on feeding colostrum from vaccinated or non-vaccinated cows



Calves fed colostrum from vaccinated cows showed significant higher level of BRSV-antibodies compared to calves fed colostrum from non-vaccinated cows ($P < 0,0001$)