

# Fertility and calving traits show inbreeding depression in Danish Holstein

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## Inbreeding depression:

- Measured as change in trait per 1 % increase in inbreeding

## Conclusions:

- Reproductive performance reduced by inbreeding
- Calving traits less affected by inbreeding

## Fertility:

- |                                 |   |
|---------------------------------|---|
| - Age at first insemination     | + 0.5 day                                 |
| - Calving to first insemination | + 0.1 day                                 |
| - First to last insemination    | + 0.3 day in heifers<br>+ 0.4 day in cows |
| - Number of inseminations       | + 0.004 in heifers<br>+ 0.006 in cows     |
| - Non-return rate 56 days       | - 0.13 % in heifers<br>- 0.11 % in cows   |
| - Days open                     | + 0.5 day                                 |



## Calving traits:

- Inbreeding reduces size of calves
- Inbreeding reduces dystocia
- Inbreeding reduces stillbirth
- Effect larger in early lactations
- Effect larger in male calves
- No maternal inbreeding depression