Session 34; Theatre 11

# Yield Losses Associated with Clinical Mastitis Occurring in Different Weeks of Lactation


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## *We knew*

that mastitis causes substantial economic losses

## *We wanted to know*

how the size of the production loss varies depending on when in lactation the cow develops mastitis

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# Animals and registrations

307 Swedish Red *(8 900 kg)*

199 Swedish Holstein *(10 600 kg)*

} 1 193 lactations

≈ 40 000 weekly milk records

The department's research farm

Detailed information on:

- Disease occurrences
- Calvings
- Reproduction
- Cullings

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# Clinical mastitis in the herd

*Definition:*

- Diagnosed by a veterinarian
- First lactational incidence

All cases were not treated with antibiotics

*Incidence per lactation:*

Primiparous cows: 0.19

Multiparous cows: 0.28

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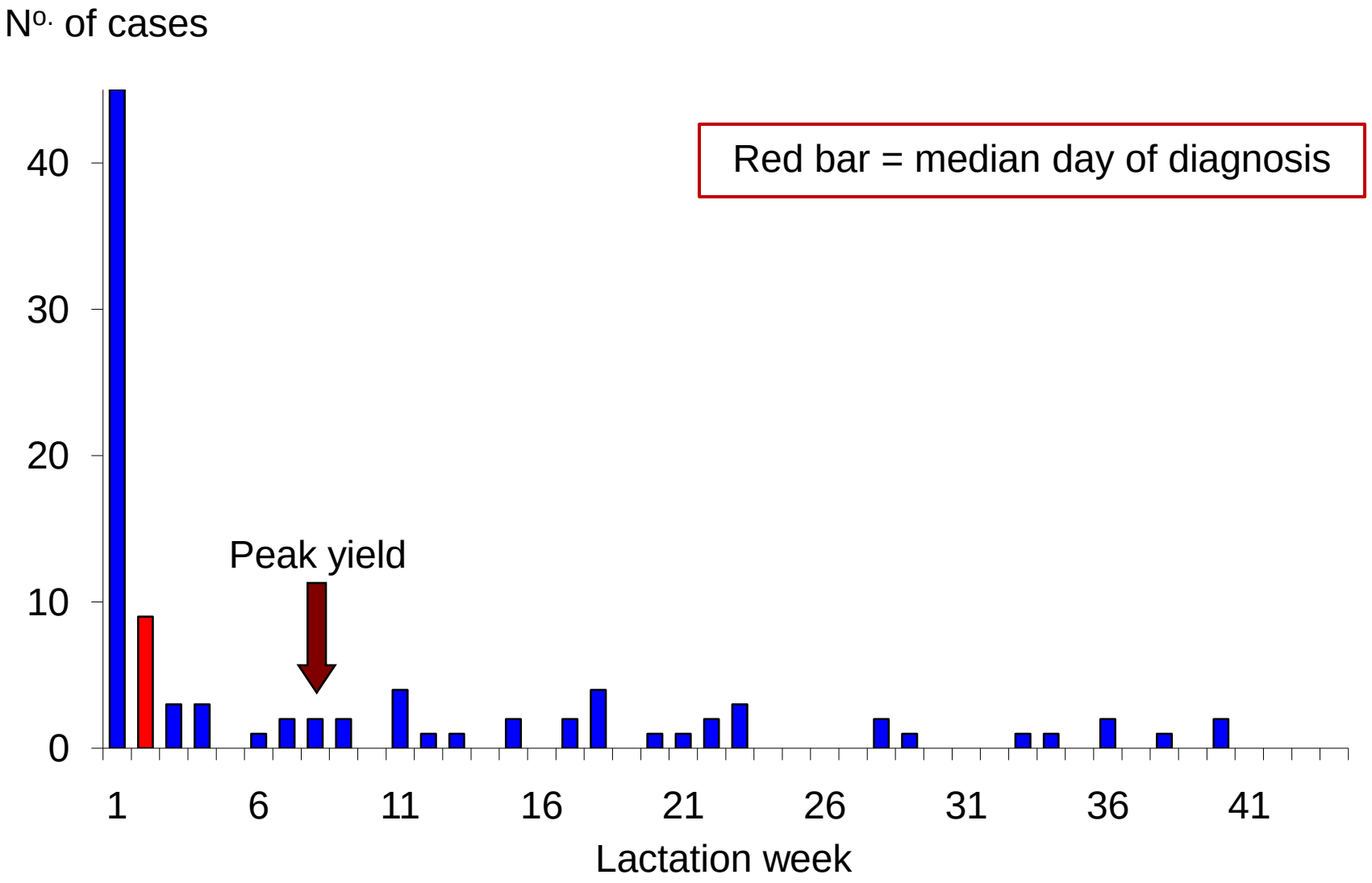
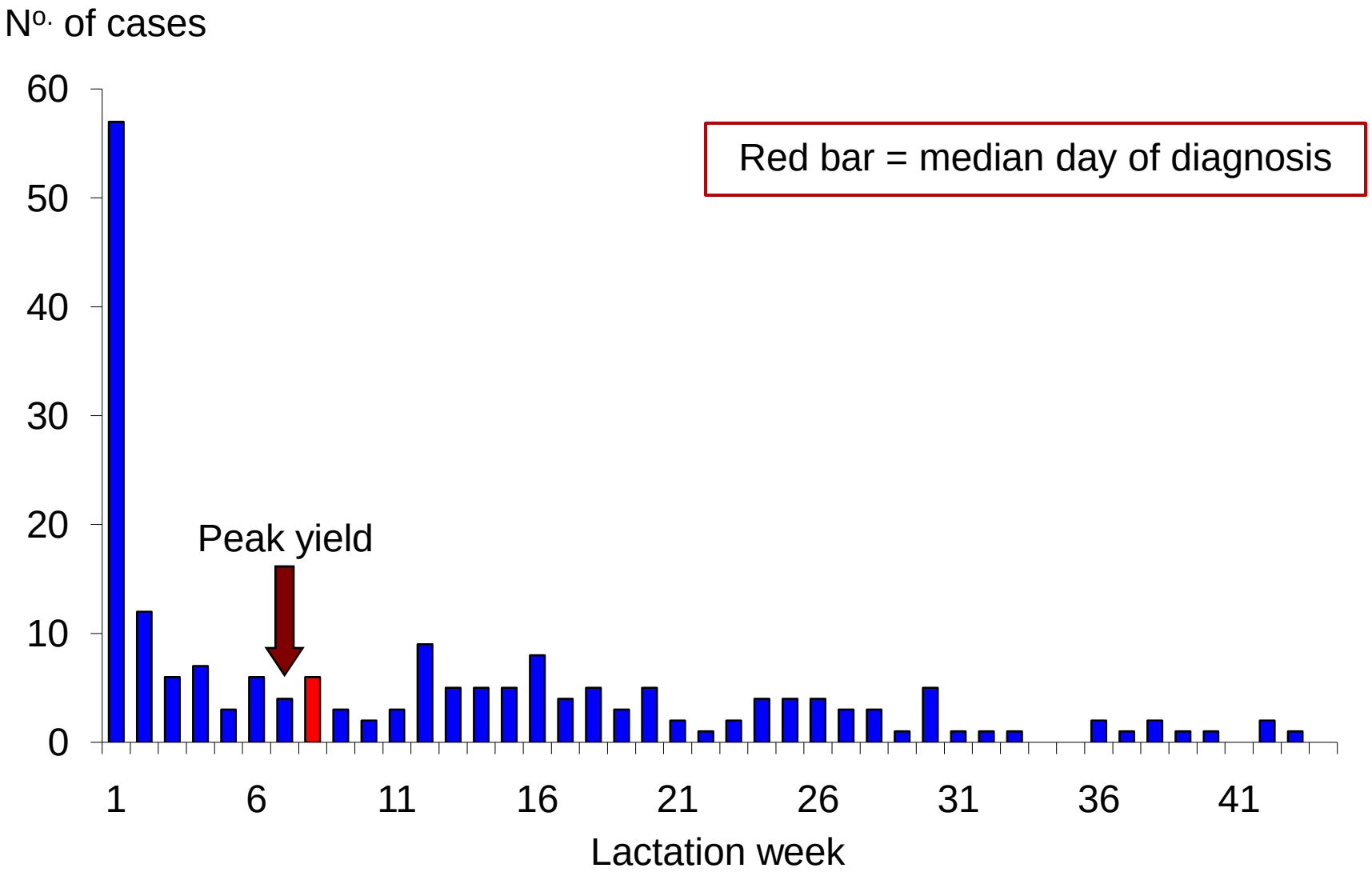
# Distribution of cases, *primiparous cows*



# Distribution of cases, *multiparous cows*



# Statistical method

Repeated measures mixed model:

Kg of milk = Lactation stage
Week relative to diagnosis
*Interaction term*

Calving disorders
Reproductive disorders
Metabolic disorders
Claw disorders

Reproductive status
Calving year/season
Parity

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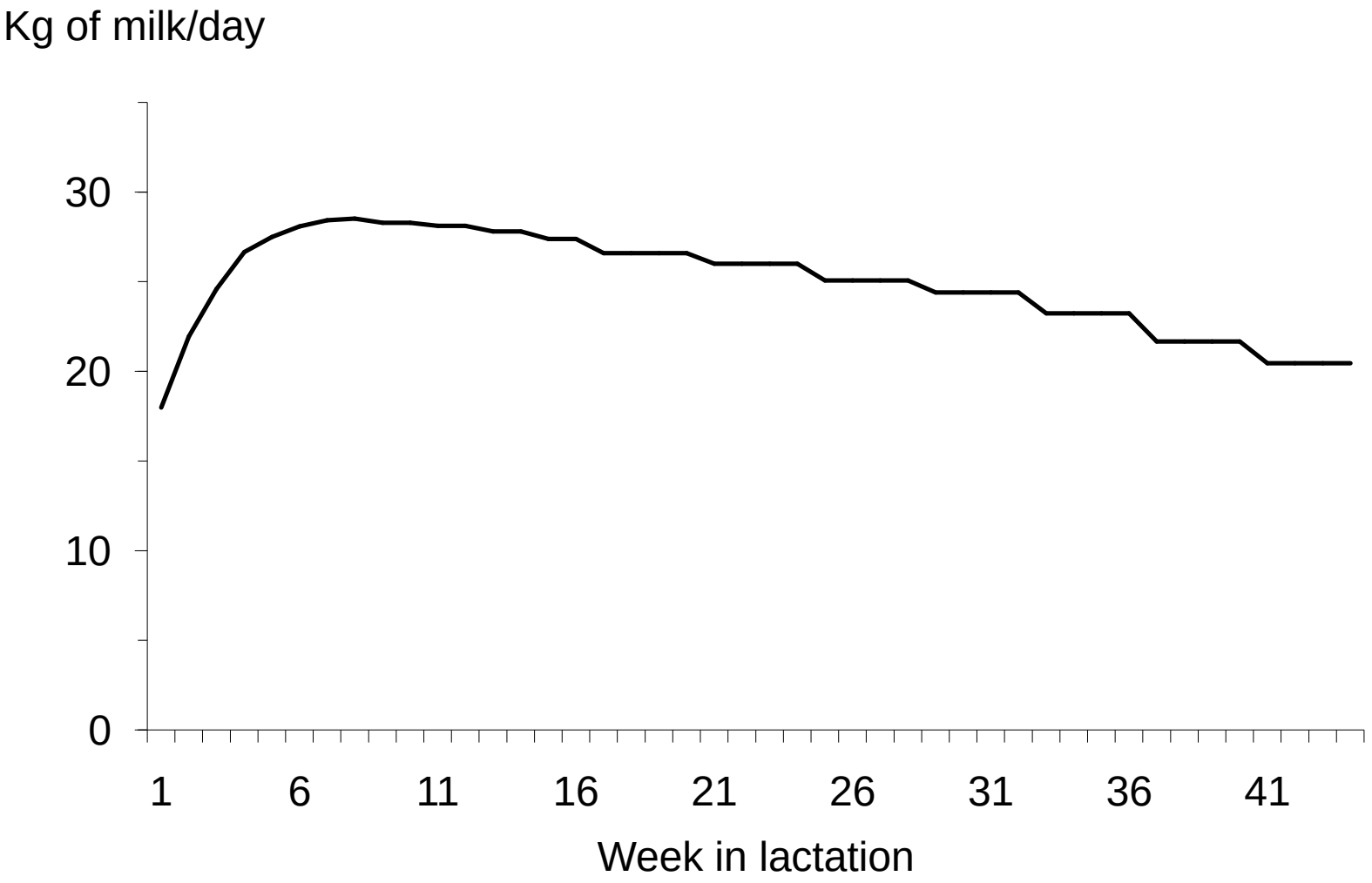
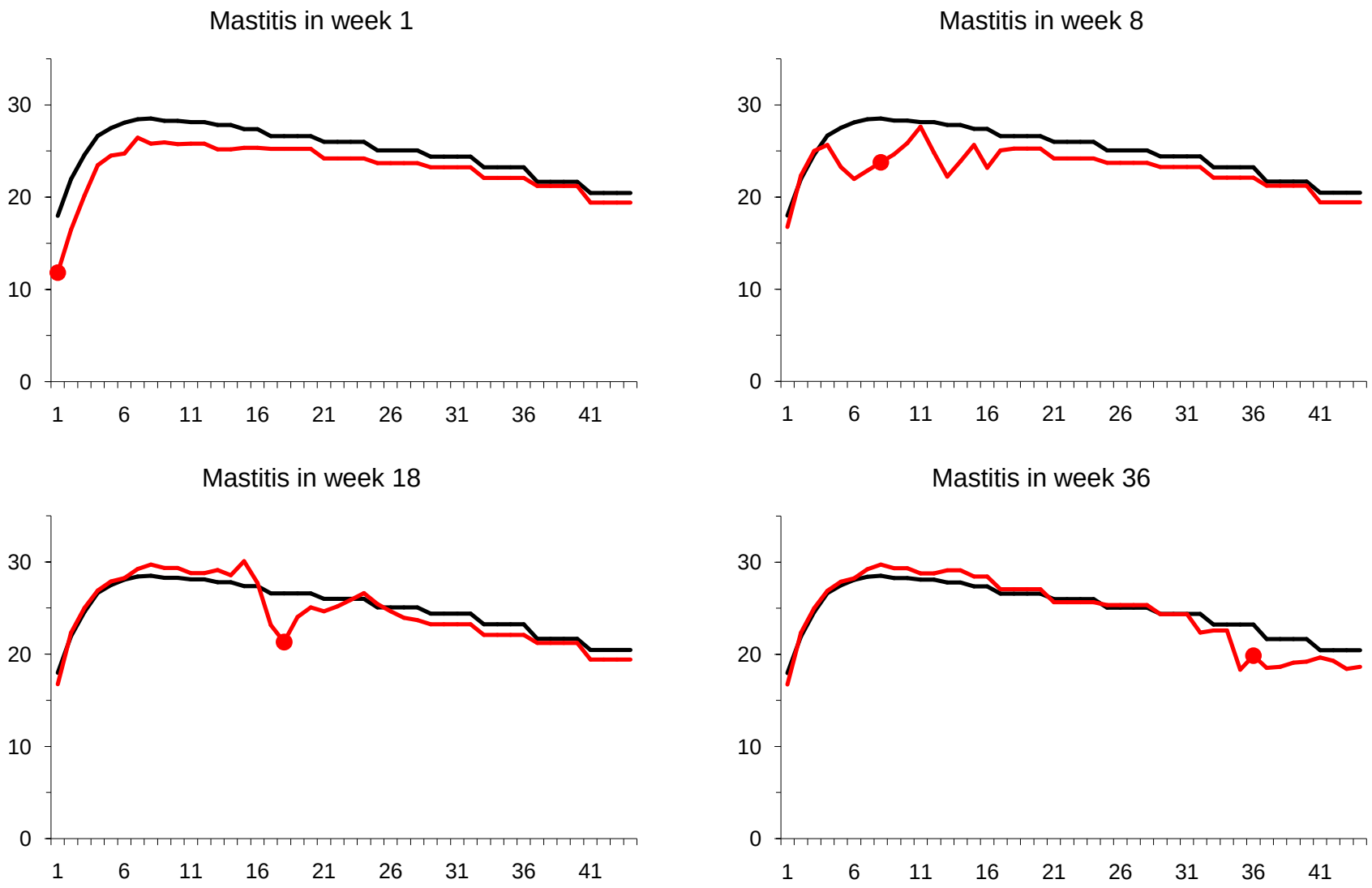
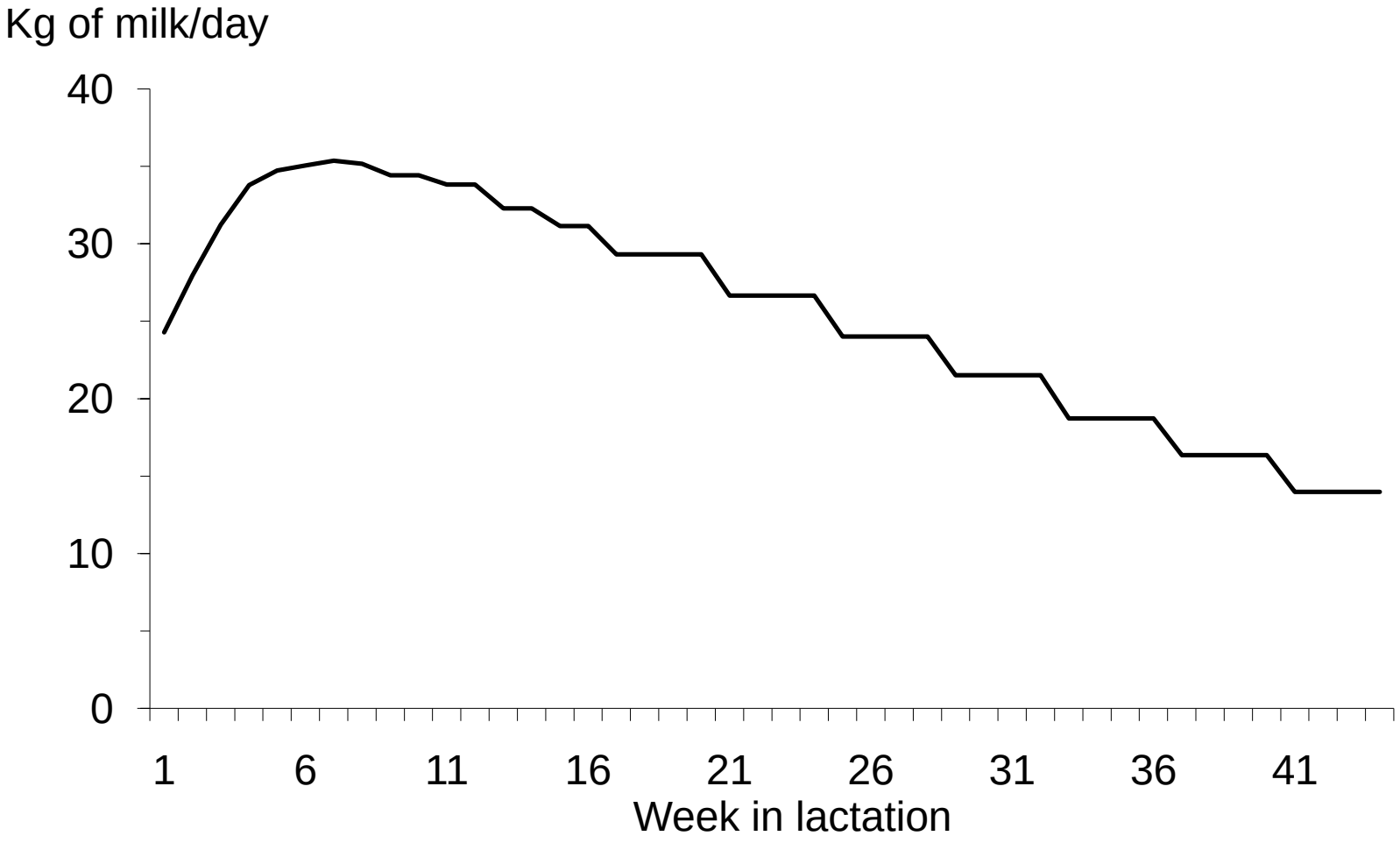
# Lactation curve, *non-mastitic* primiparous cows



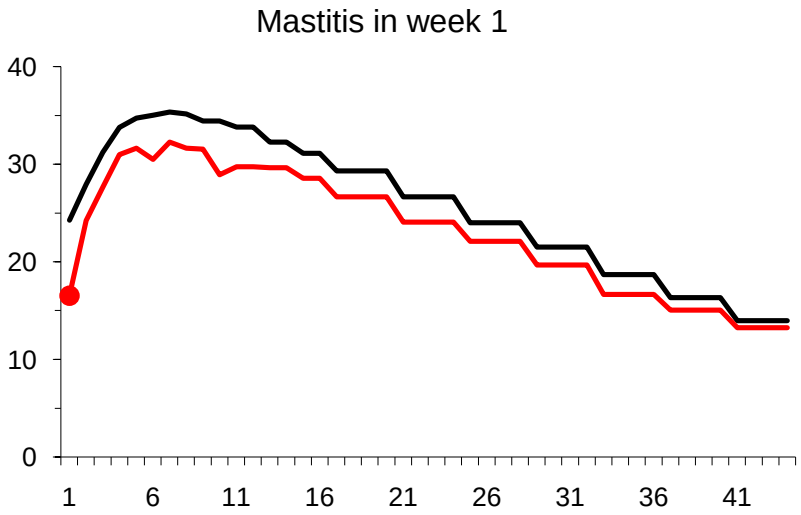
# Lactation curves, *mastitic* primiparous cows

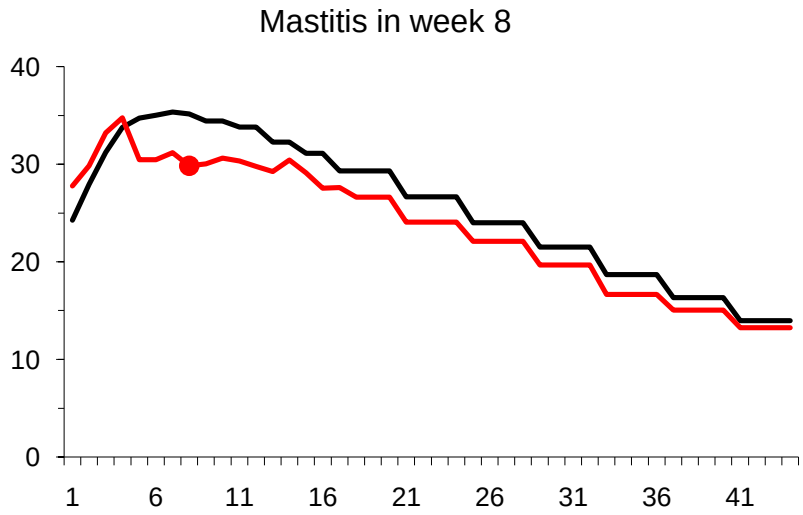


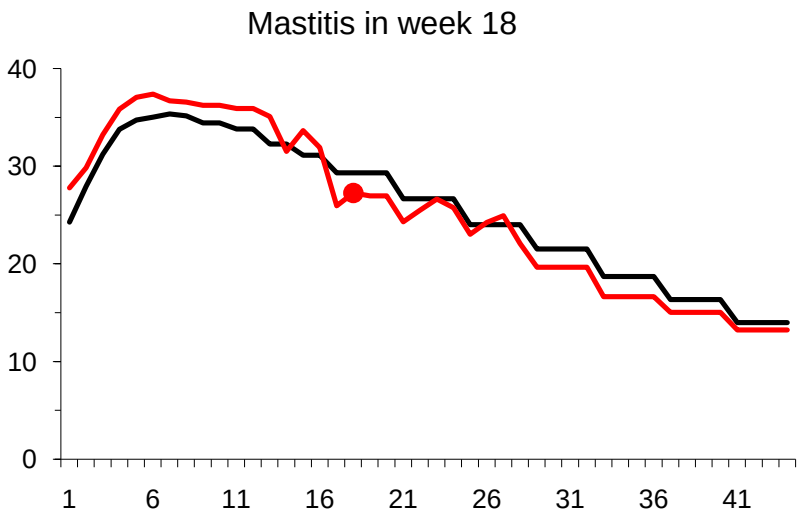
# Lactation curve, *non-mastitic* multiparous cows

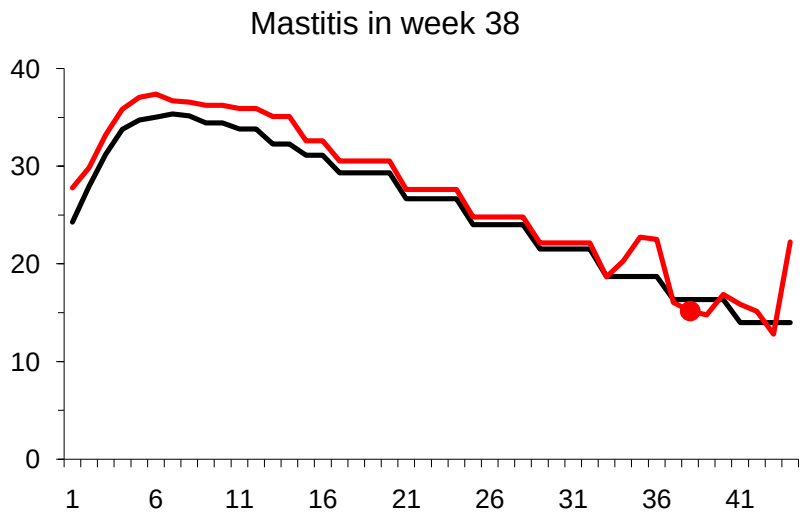


# Lactation curves, *mastitic* multiparous cows

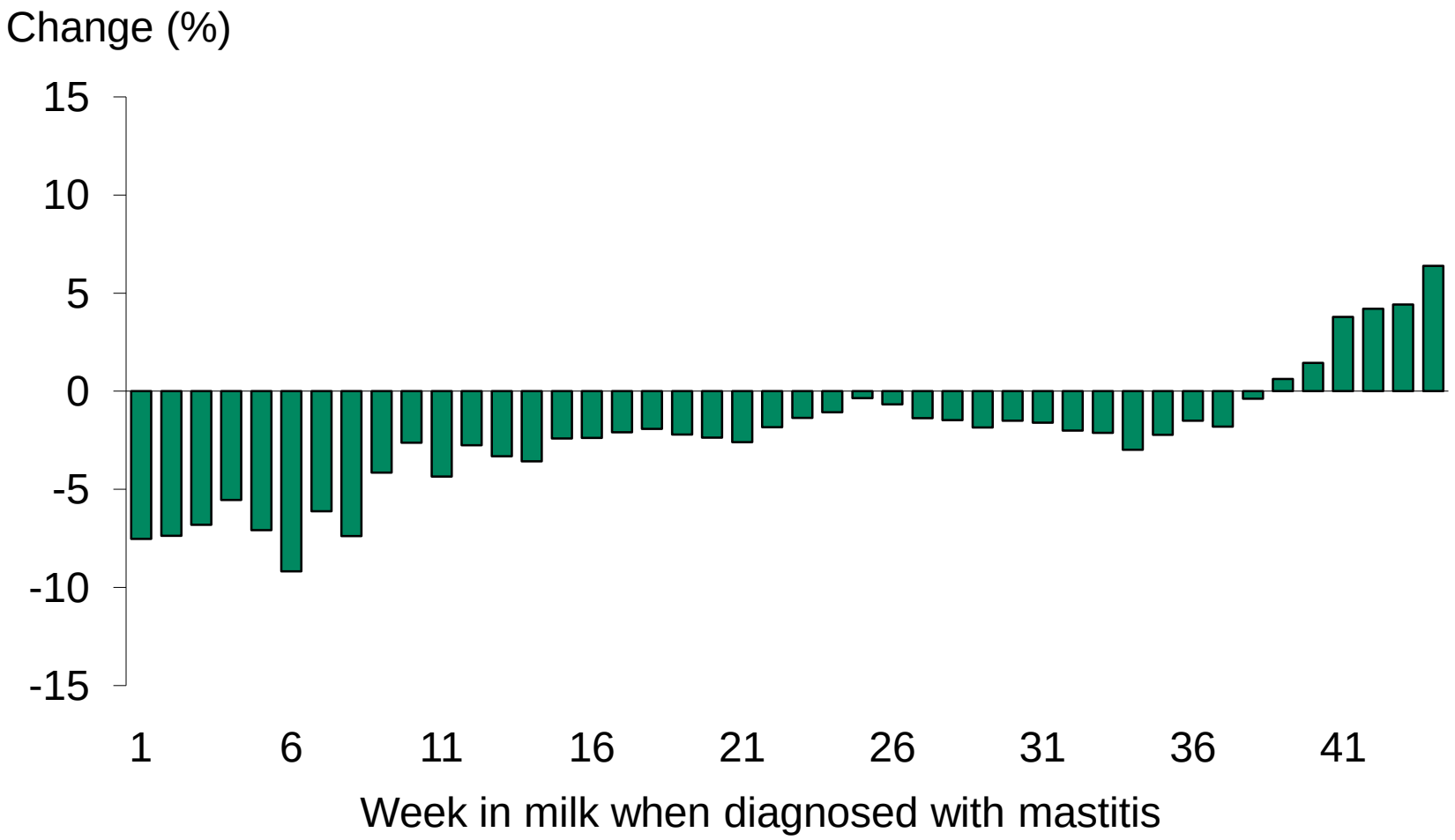


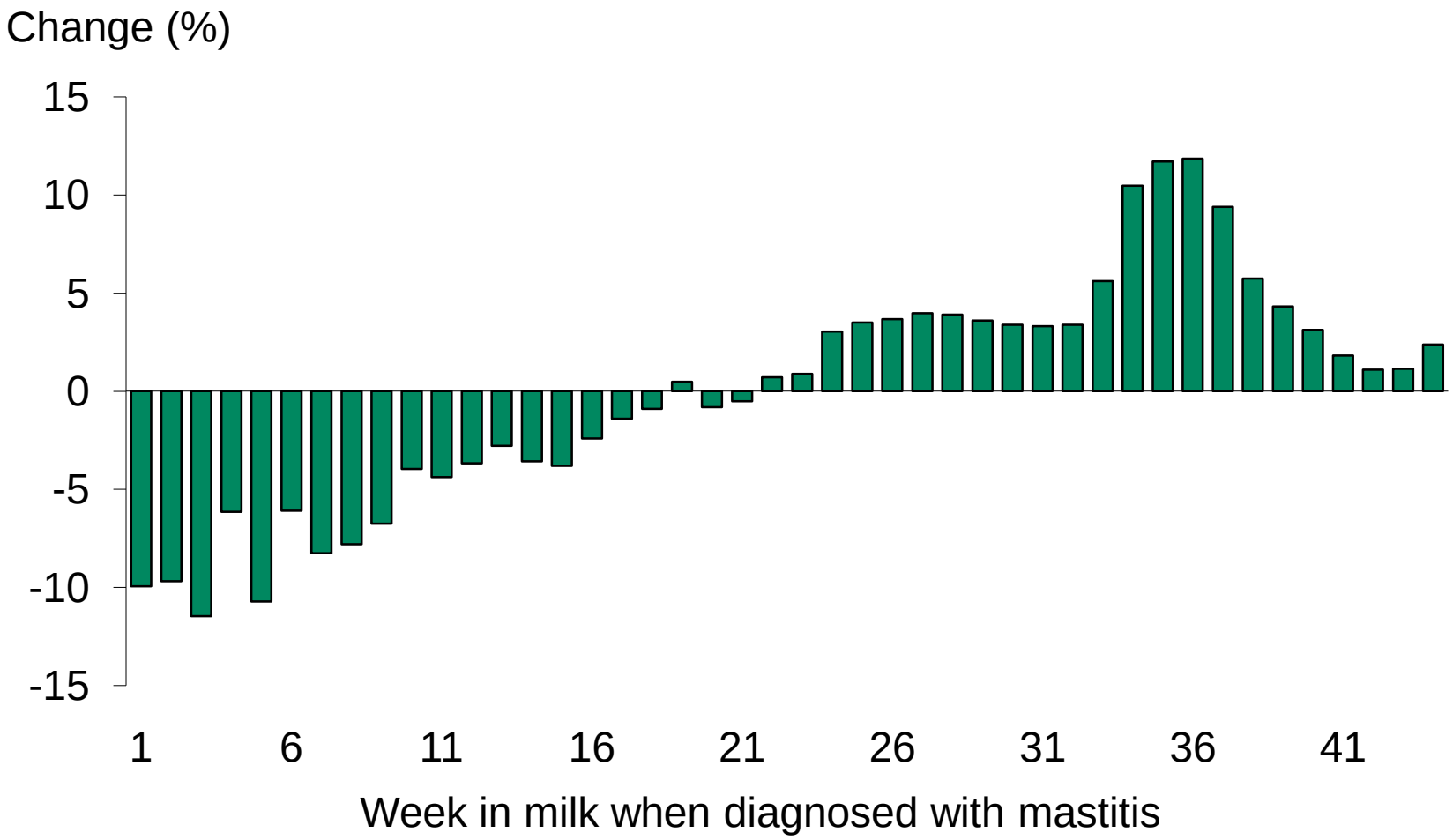



# Proportional change in 305-day milk yield, primiparous cows



# Proportional change in 305-day milk yield, *multiparous cows*



# Conclusions

- The magnitude of the milk loss depends on lactation week at clinical onset

- Most extensive 305 day milk loss:
  - primiparous cows diagnosed in week 6
  - multiparous cows diagnosed in week 3

- Daily milk yield decreases 2-4 weeks prior to clinical onset

- Milk yield is suppressed throughout the rest of the lactation

*For more information: J Dairy Sci 2007, vol. 90 p. 2260-2270*

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