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Shortening of the dry period did not prevent hypocalcemia at calving

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HYPOCALCEMIA

Picture from: Baker, ”Live stock – A cyclopedia for the farmer and stock owner”, 1914

Why important?

- **Clinical (milk fever) – 5-10 % of cows** (Oetzel, 2011)

- **Subclinical – 50 % of cows** (Reinhardt et al., 2011)

Why interesting?

- **Affected by diet** (Katsoulos et al., 2005)
- **Affected by oral prophylactics** (Goff et al., 1996)
- **Affected by milking/milk production?**
  - **Yes** (Goff et al., 2002; Littledike, 1976)
  - **No** (Smith et al., 1948; Salgado-Hernández et al., 2014)

Shortened dry period

- ▼ **Milk yield at dry off** (Pezeshki et al., 2010)
- ▲ **Energy balance after calving** (Watters et al., 2008)
- ▼ **Total milk production** (Watters et al., 2008)

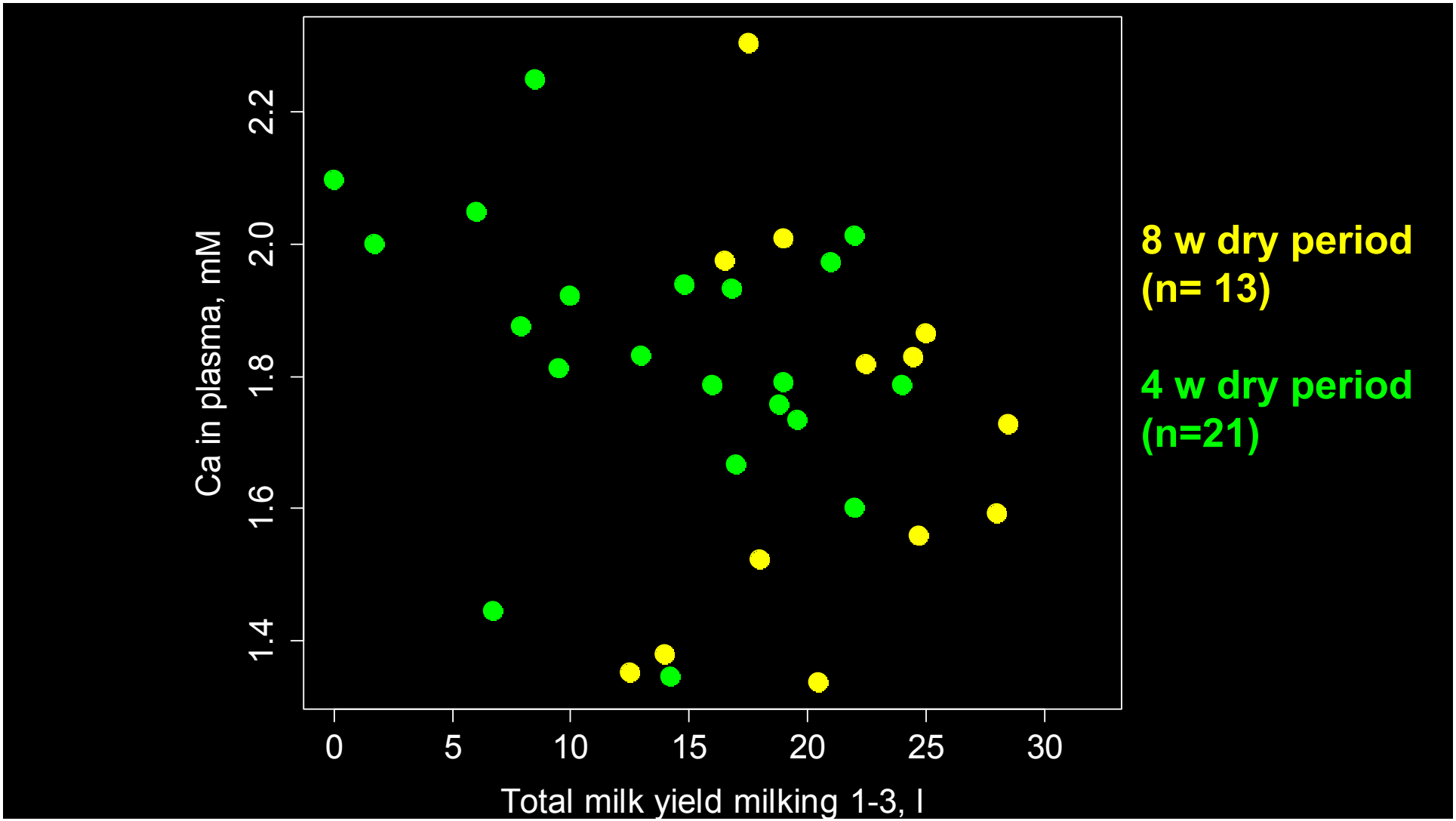
- ▼ Colostrum production (50 % loss) during the first 3 milkings (Sundman, 2013, unpublished data)

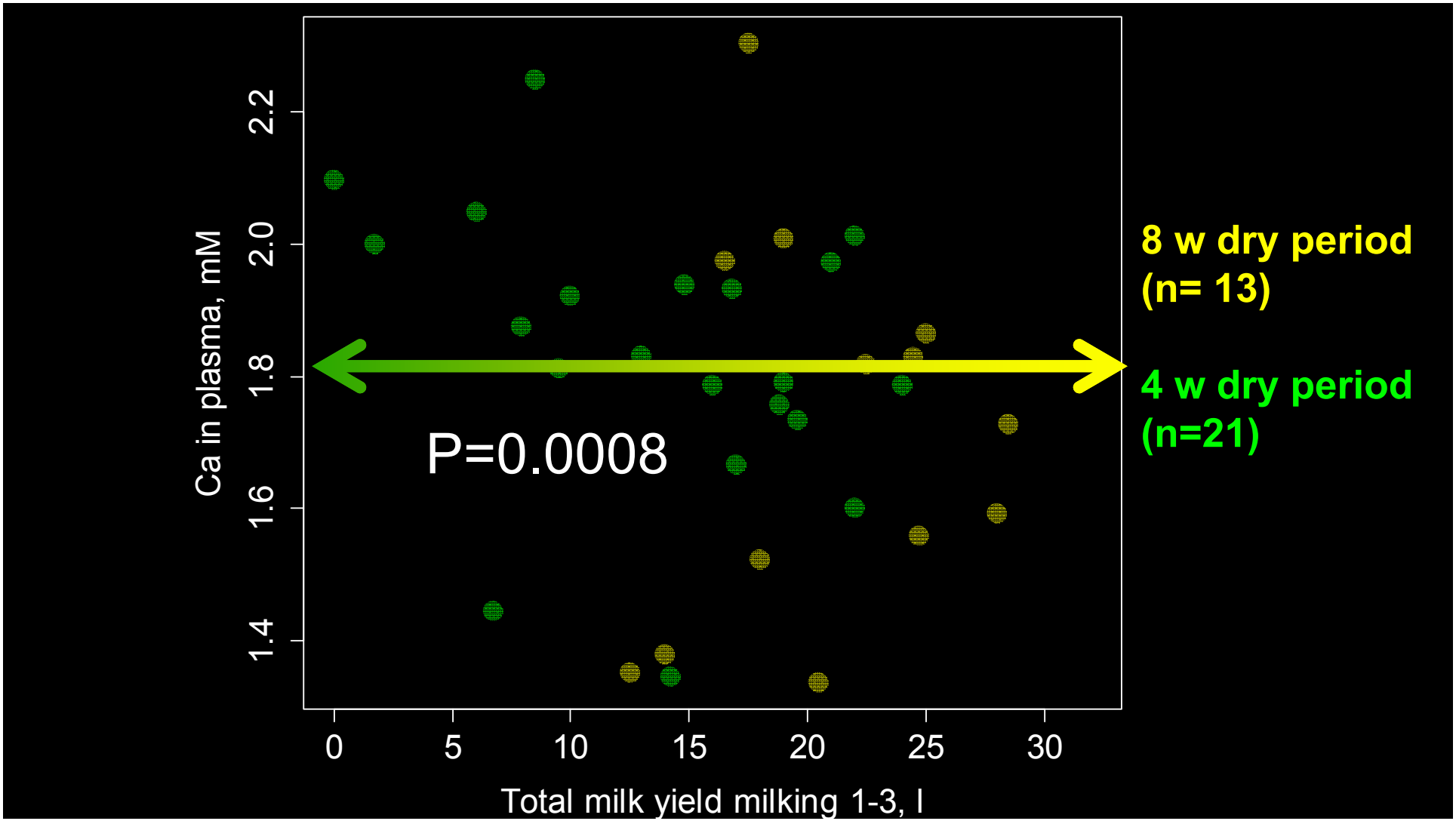
HYPOTHESIS:

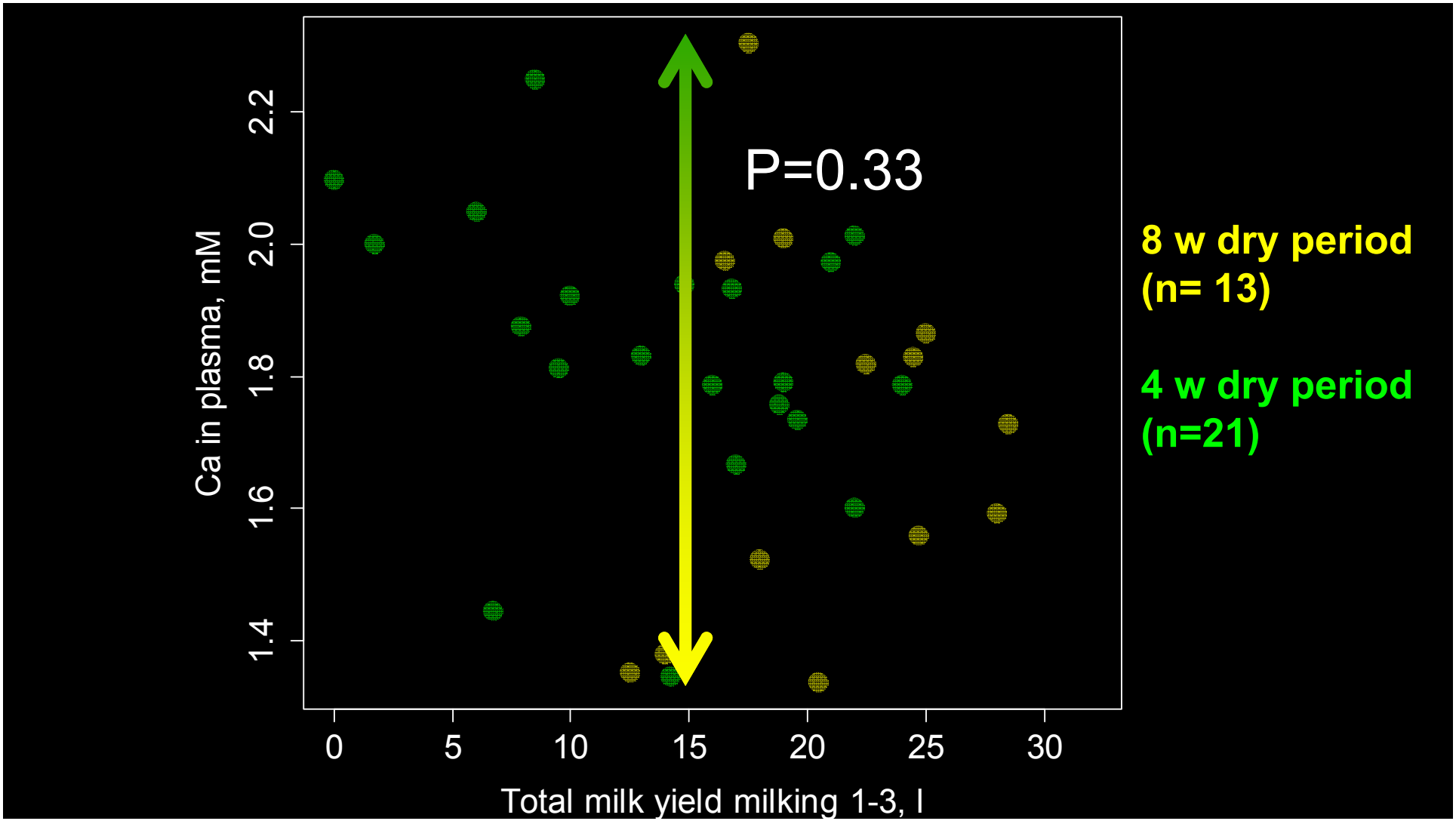
Shortened dry period decreases colostrum production, and results in higher plasma calcium after calving

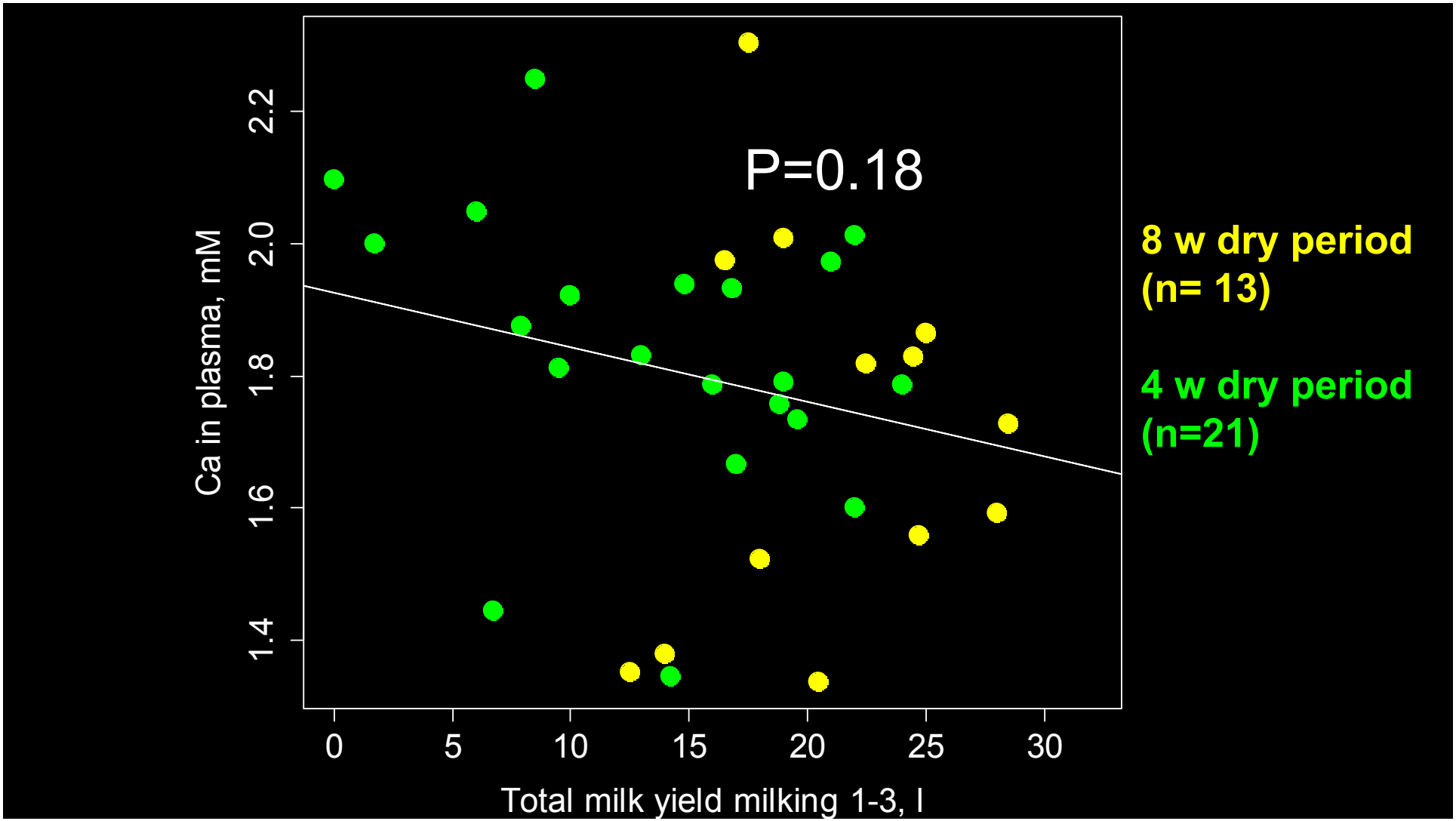
MATERIAL AND METHODS

- 34 cows (SRB, Holstein)
- Dry period 8 or 4 weeks
- Plasma sample after calving (24 h)
- Milk yield measurements milking 1-3


Ca in plasma, mM
1.4
1.6
1.8
2.0
2.2
0
5
10
15
20
25
30
Total milk yield milking 1-3, l
8 w dry period
(n= 13)
4 w dry period
(n=21)


Ca in plasma, mM
1.4
1.6
1.8
2.0
2.2
0
5
10
15
20
25
30
Total milk yield milking 1-3, l
P=0.0008
8 w dry period
(n= 13)
4 w dry period
(n=21)


P=0.33
Ca in plasma, mM
1.4
1.6
1.8
2.0
2.2
0
5
10
15
20
25
30
Total milk yield milking 1-3, l
8 w dry period
(n= 13)
4 w dry period
(n=21)


P=0.18
Ca in plasma, mM
1.4
1.6
1.8
2.0
2.2
0
5
10
15
20
25
30
Total milk yield milking 1-3, l
8 w dry period
(n= 13)
4 w dry period
(n=21)

CONCLUSION

Shortening of the dry period decreased colostrum production, but did not affect plasma Ca after calving

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Thank you for listening!