



SCIENCE AND
EDUCATION **FOR**
SUSTAINABLE
LIFE

Reproductive performance of dairy cows kept with their calves

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Question 1

What voluntary waiting period before first insemination do you have on your farms?

For primiparous cows (in their first lactation):

- a) No waiting period, I wish to inseminate at first detected oestrus after calving
- b) I want to wait at least 30 days before first insemination
- c) I want to wait at least 50 days before first insemination
- d) I want to wait at least 90 days before first insemination
- e) I want to wait at least 120 days before first insemination

For multiparous cows (second lactation and later lactations)

- a) No waiting period, I wish to inseminate at first detected oestrus
- b) I want to wait at least 30 days before first insemination
- c) I want to wait at least 50 days before first insemination
- d) I want to wait at least 90 days before first insemination
- e) I want to wait at least 120 days before first insemination



SLU Lövsta dairy research herd

275 cows (235 milking, 40 dry)

Two **dairy** breeds:

Swedish red

Swedish Holstein

Average yearly milk yield: 11,500 kg

Automatic milking system

Grazing: 3 months in summer

Spontaneous oestrus



Photos: Renée Båge



Photo: Prereic Öberg, Aerobilder



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CCC project at SLU

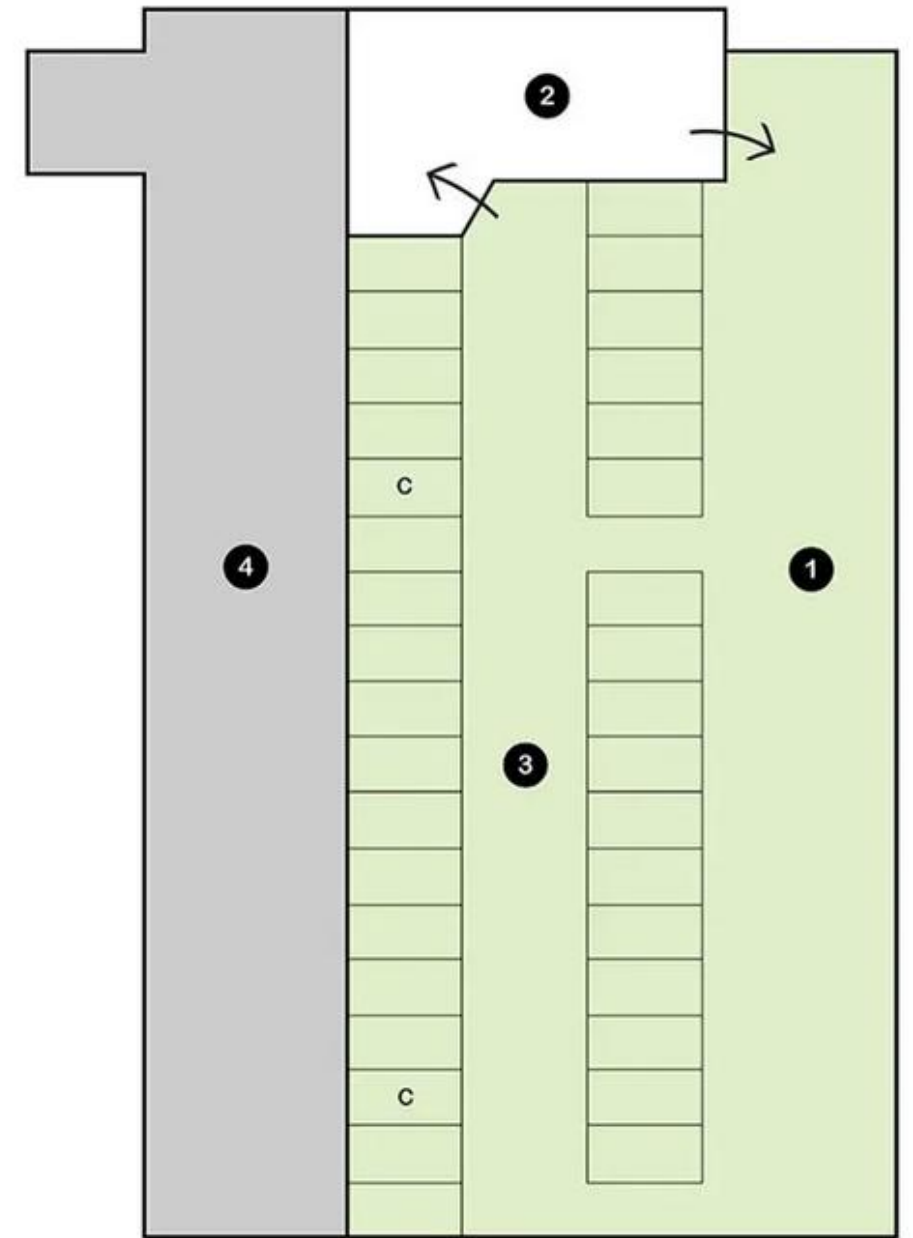
Ongoing since 2019

Data from 7 batches with different research focus and study setup:

- Contact duration 3-6 months
- With/without pasture access
- Weaning method
- Cow vs. calf-driven



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The barn design during batch 5 of the project. Drawing made by Claire Wegner.



Photo: Sigrid Agenäs

Background

Few recent studies of how prolonged cow-calf contact affects fertility.

Results from previous studies:

Studies from the 80's and 90's:

- First oestrus delayed (Thomas et al., 1981)
- No differences in days open, number of inseminations or pregnancy rate (Krohn et al., 1990)

Survey of farmers practicing CCC

- Did not perceive fertility to be different to farmers not practicing CCC (Eriksson et al., 2022)

Pilot study, 30 cows:

- Delayed ovulation in 7/30 CCC cows (23%)
But no control group (Garmo et al., 2024)

Aim

Investigate reproductive performance of cows allowed vs. not allowed CCC in an AMS system in a high-yielding dairy herd



Available cows and data

Total number of cows:

125 Cow-Calf Contact (CCC)

92 conventional (CONV)

Registrations:

Calving

Oestrus + milk progesterone (HerdNavigator)

Inseminations

Pregnancy diagnosis

Body condition score

Disease events

Culling

Evaluation of reproductive performance

Contact lactation

Following lactation



Photo: Martin Stigge



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Results: contact lactation



Question 2

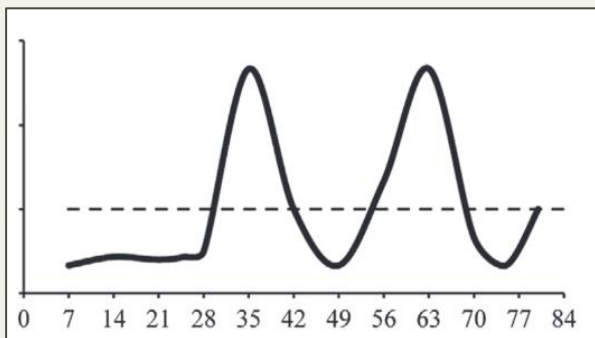
What oestrus detection method do you use on your farm?

- a) Visual oestrus control
- b) I use a bull
- c) Activity sensors
- d) Milk progesterone (for example HerdNavigator)



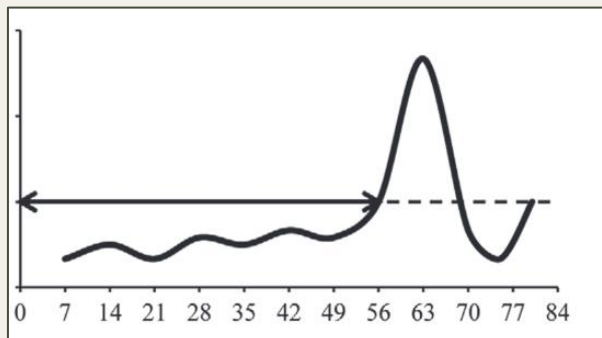
Cyclicity

Progesterone profiles



Normal cyclicity

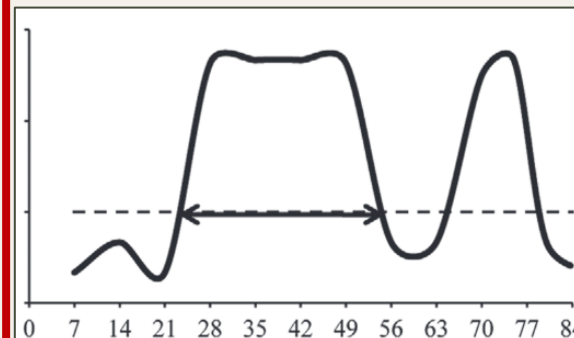
CCC 52%
CONV 65%



Delayed start

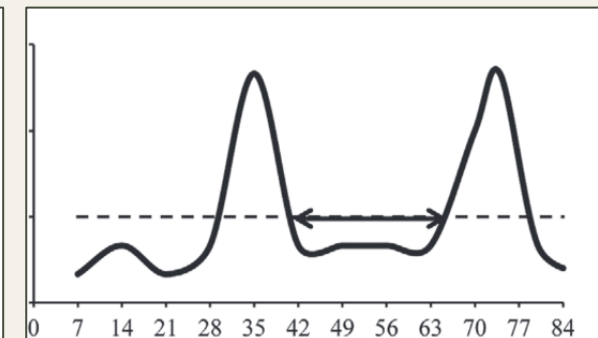
CCC 28%
CONV 4%

=> Statistically significant



Prolonged luteal phase

CCC 9%
CONV 20%



Interrupted cyclicity

CCC 15%
CONV 9%



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(Figures modified after Nyman et al., 2014)

Results: Contact lactation

Time to first observed oestrus

Time to first observed oestrus:

- CCC cows: 35 days
- CONV cows: 27 days

=> Statistically significant difference

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<div> <div>5</div> <div>531 BL 676 BR RX 588 br 674 BL 706 BL 302 br 830 2 825 BR RX 656 Br</div> </div>	<div> <div>26</div> <div>771 BR RX 710 BR RX 1 April 858 BL</div> </div>
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<div> <div>8</div> <div>656 br 686 BR RX 712 br 983 Br 583 br 657 BR RX 590 br 380 3 695 BR RX 302 BL</div> </div>	<div> <div>29</div> <div>852 BL 972? 708? 383 BL</div> </div>

Results: contact lactation

Calving to first insemination interval

- CCC cows: 95 days
- CONV cows: 92 days

⇒ **Not statistically significant**

First service conception rate

- CCC cows allowed: 30%
- CONV cows: 31%

⇒ **Not statistically significant**

Both groups had similar:

- Calving interval
- Days open – until conception
- Insemination period length

⇒ **Not statistically tested**



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Photo: Hanna Eriksson

Results: Following lactation



Results: following lactation

Both groups had similar:

- Calving to first insemination interval

- First service conception rate

- Days open – until conception

- Insemination period length

- Calving interval

⇒ **Not statistically tested**



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Photo: Martin Stigge

Conclusions



Conclusions



Our preliminary findings indicate:

- CCC delays the onset of cyclicity and time to first observed oestrus

But:

- Similar interval to first insemination and first service conception rate

And:

- No obvious impact on reproductive performance during the following lactation

Might have practical implications in farms wishing for a short interval between calving and first insemination.

However, in our high-yielding research herd with rather long interval to first insemination, such implications are minimal.

★ Thank you for your attention! ★

Thank you to:

- My colleagues and co-authors:

- Hanna Eriksson
- Sofia Nyman
- Renée Båge
- Sigrid Agenäs



FORMAS

- Lövsta Staff



- The funders

For making this possible!



QR to the project
home-page
Cow and calf
together



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for this invitation!



Photo: Johan von Feilitzen

Renée Båge



Photo: Växa

Sofia Nyman



Photo: Jenny Svehns-Gillner

Sigrid Agenäs Hanna Eriksson



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Coming TDN Webinar:



QR to the webinar home-page



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TDN-Webinar: Cow-calf contact on different continents – lessons learned so far

Date: 11 December 2025

Time: 10:00 - 12:15

Organiser: Swedish University of Agricultural Sciences, SLU

Co-organiser: TDN - Transform Dairy Net

Venue: Loftets hörsal and Online

Location: Online, Uppsala