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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

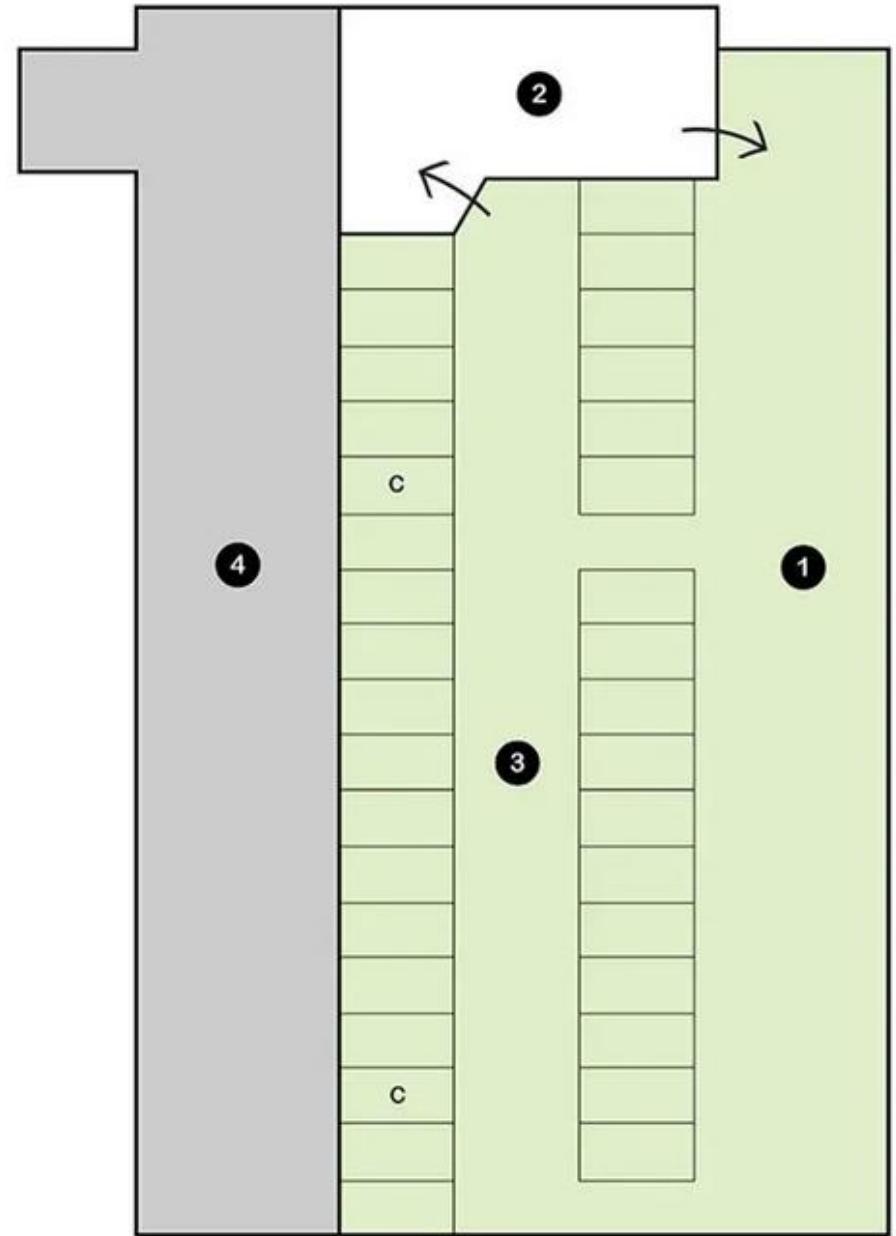
Ongoing since 2019

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.*

# 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)



Photo: Sigrid Agenäs

# 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

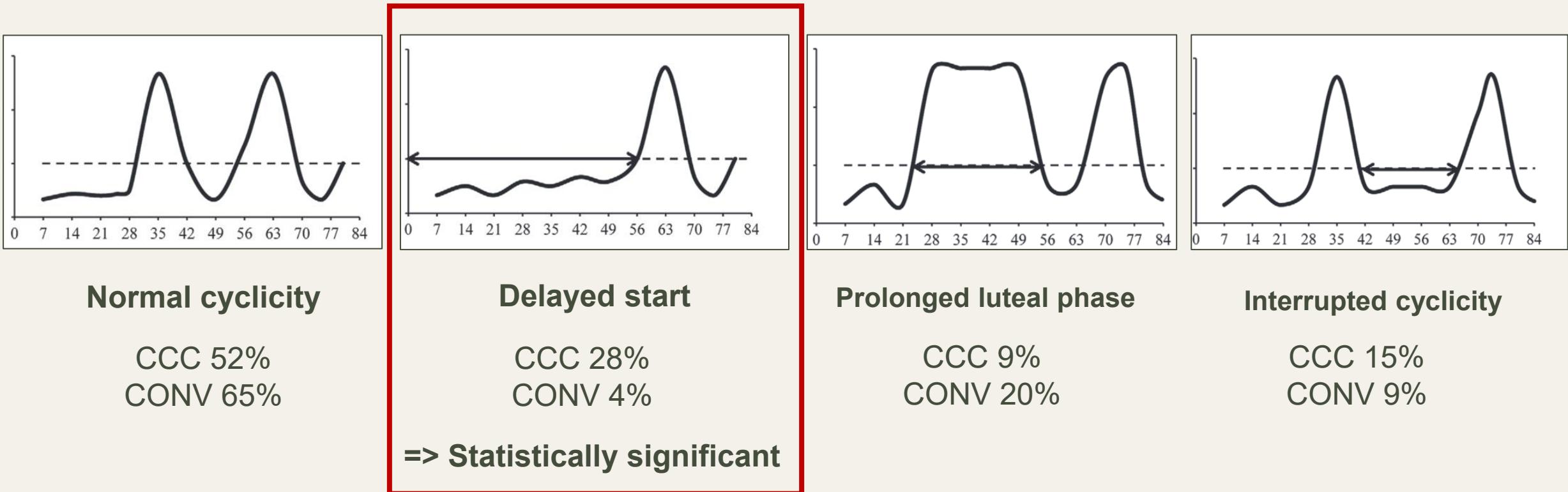
**What oestrus detection method do you use on your farm?**

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



# Cyclicity

## Progesterone profiles



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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

8 656? 817BL 674?	29 829br :
✓ 20 852vf	3 678BL 583br+vf 821BL 766br 475br 580br 321 2 771br V 23 9 850BL 521BR <sup>111</sup> 676br 727brx 383vf 710br 531BRX 566BR <sup>111</sup> 677br 807BL 532BL
	24 850? 672? 820 6534br 666br 833 30 796? 712br 531 533? 771m 521
	4 580+646 678BL 674Br AI 583vf 710 BR <sup>111</sup> 656br 778br? 706var 10 531BRX 566BL 825? 854var 521BRX 847 2 706BR 706BR 674BR
852vf	25 706BR <sup>111</sup> 67 850? 533? 65 31 580 574br? 842? 824BL 842? 824BL
	5 531BL 676BR <sup>111</sup> 588br 674BL 11 706BL 302br 825BR <sup>111</sup> 830? 656br 808var 712vf 708var 588vf
	26 771BR <sup>111</sup> 710BR <sup>111</sup> 57 1 April 250BR <sup>111</sup> 55BL
	6 431BR <sup>111</sup> 983br 804? 71BL 842? 583br 12 710BL 656br 839br 625BL/BL 657? 380? 730vf 695? 695? 588vf
543var 826var 91	27 852BR 844BR <sup>111</sup> 70 2 730BR 383BR 89
	7 583br 583br 695br 590br 652BR <sup>111</sup> 321 2 708var 672br 471br 383BR <sup>111</sup> 730var 588br 985BR <sup>111</sup> 671br 588vf 583vf 807vf
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	8 656br 686BR <sup>111</sup> 983br 712br 657BR <sup>111</sup> 310br 708var 583br 380? 583br 829vf 590br 695BR <sup>111</sup> 302BL 730var 695? 302BL 593vf
	29 852BL 47 4 972? 67 708? 383BL 89
	30 580? 3



# 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



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# 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.



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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
- Lövsta Staff
- The funders



For making this possible!

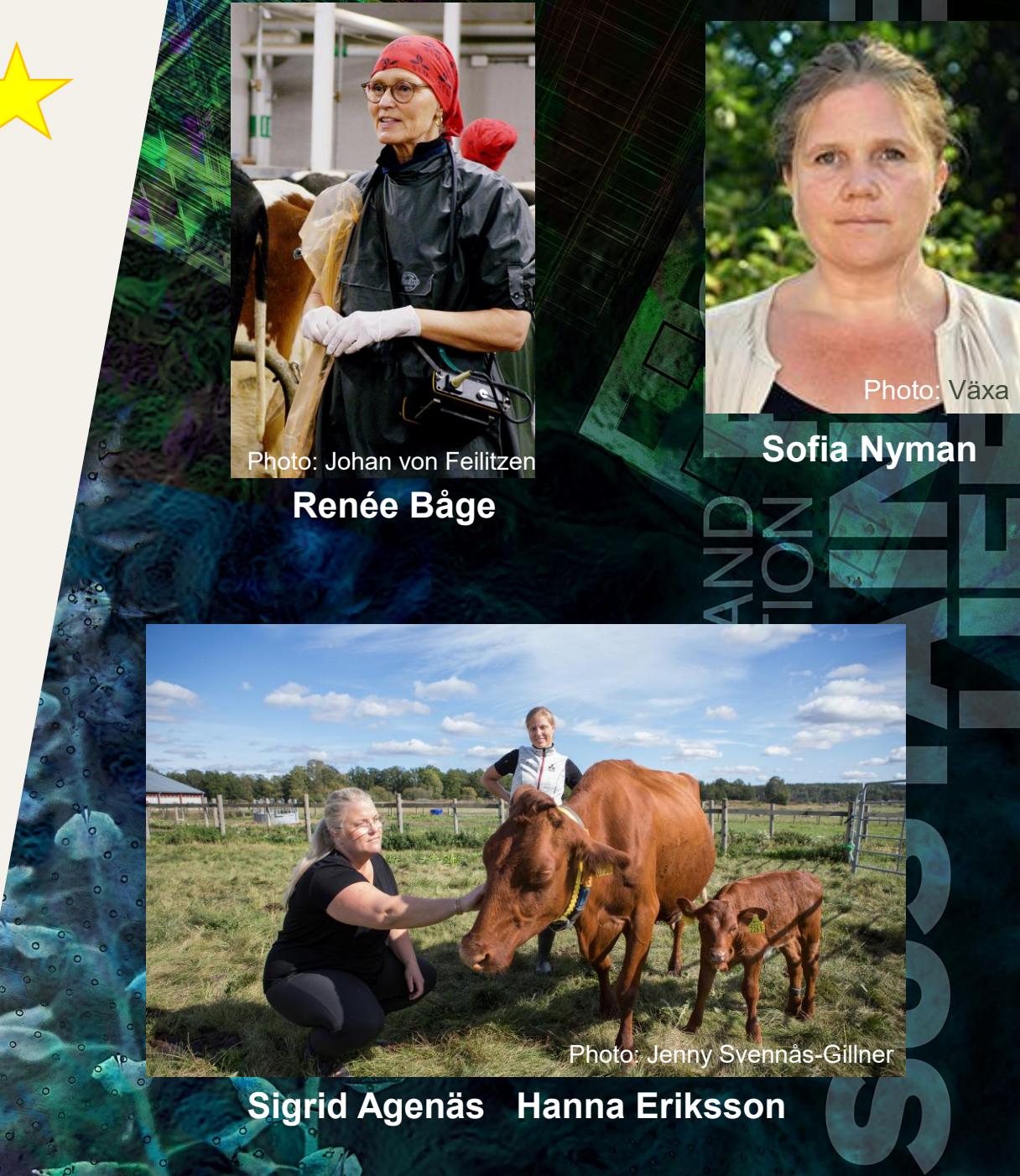


QR to the project  
home-page  
Cow and calf  
together



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for this invitation!



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