



Resilience for Dairy (R4D) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101000770



Resilience4Dairy: Towards a socially sustainable dairy industry with cow-calf contact systems

Heather W. Neave, Maja Bertelsen, Emma Hvidtfeldt Jensen
and Margit Bak Jensen

LYON 31/8/2023



Cow calf separation... is it really a problem?

NEW ZEALAND

Calves taken, cows made pregnant for milk: Animal welfare protest targets dairy industry

13 Nov, 2017 5:11pm

© 5 minutes to

Guardian
Read by readers
→

Search jobs Sign in Search The Guardian For 200 years International edition

Home Sport Culture Lifestyle More

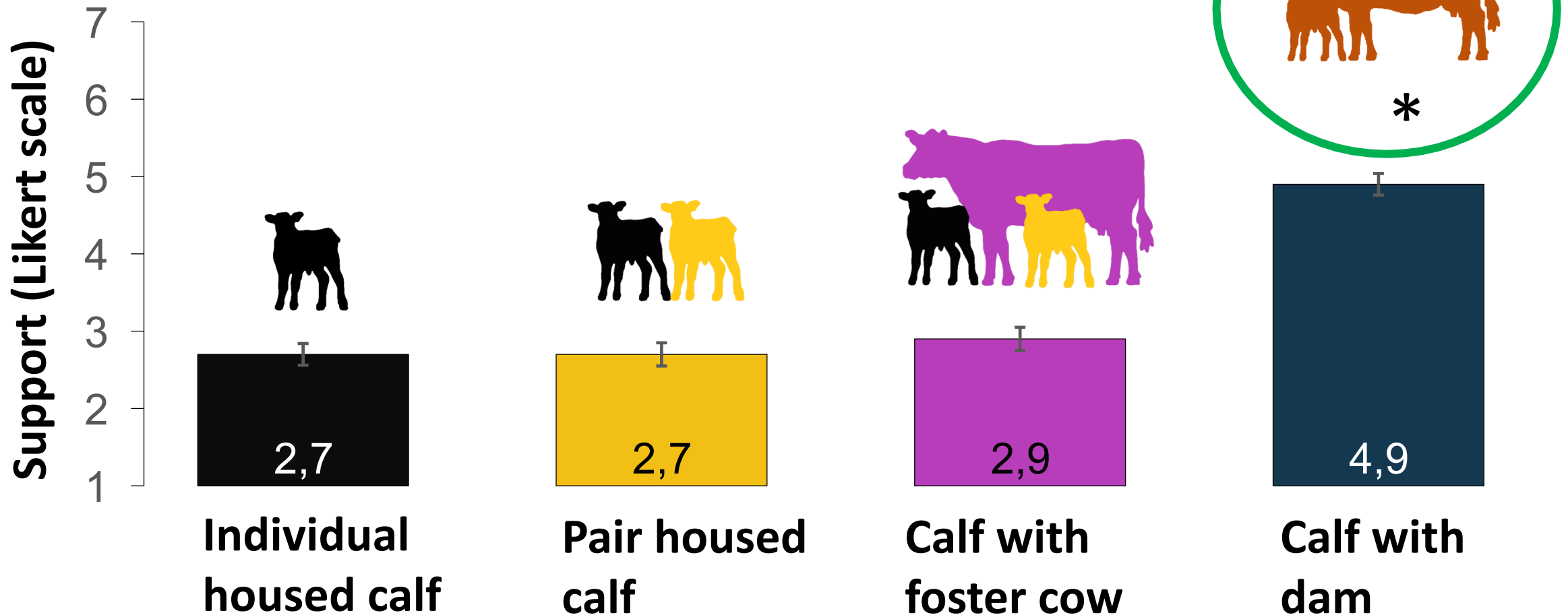
Wildlife Energy Pollution

Rise of ethical milk: 'Mums ask when cows and their calves are separated'



er while calves are being taken away. SAFE says cows are distressed when they're
children just like a human mother would be. / Supplied by SAFE

Americans and Canadians prefer to see the calf remain with the dam



N=1497 participants

Sirovica et al. 2022. *J. Dairy Sci.* 105: 3248-3268



J. Dairy Sci. 105:453–467

<https://doi.org/10.3168/jds.2021-21047>

© 2022, The Authors. Published by Elsevier Inc. and FASS Inc. on behalf of the American Dairy Science Association®.

This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

Dairy farmers' perspectives on providing cow-calf contact in the pasture-based systems of New Zealand

**Heather W. Neave,^{1*}† Christine L. Sumner,² Roxanne J. T. Henwood,³ Gosia Zobel,¹ Katie Saunders,⁴
Helen Thoday,⁴ Trevor Watson,¹ and James R. Webster⁵**

¹Animal Behaviour and Welfare, Ruakura Research Centre, AgResearch Ltd., 10 Bisley Rd, Hamilton 3214, New Zealand

²Royal New Zealand Society for the Prevention of Cruelty to Animals, 3047 Great North Road, Auckland 0600, New Zealand

DairyNZ

agresearch

āta mātai, mātai whetū

A common theme from farmers...

Bonding and separation stress

“Just from a personal perspective, being a mum, it would seem like they had that much more bonding time [if they were left together for longer] to just get ripped away from each other”

-Conventional farmer

“It [separating cows and calves] is a stressful time for everyone I think. Cow, calf, and the person separating them. It is just what you have to do”

-Conventional farmer

Neave et al., 2022. J. Dairy Sci. 105: 453-467



The separation and weaning response seen after more than 3 months of suckling was acceptable in the light of the positive effects cows and calves had during the time together

*Bertelsen and Vaarst (in press)
J. Dairy Sci.*

A possible solution....
Part-time contact (during day or night only)



Two large studies: 40 and 56 cow-calf pairs

Full-time cow-calf contact:
Cows with calves for day and night,
excluding milking time (23 h)

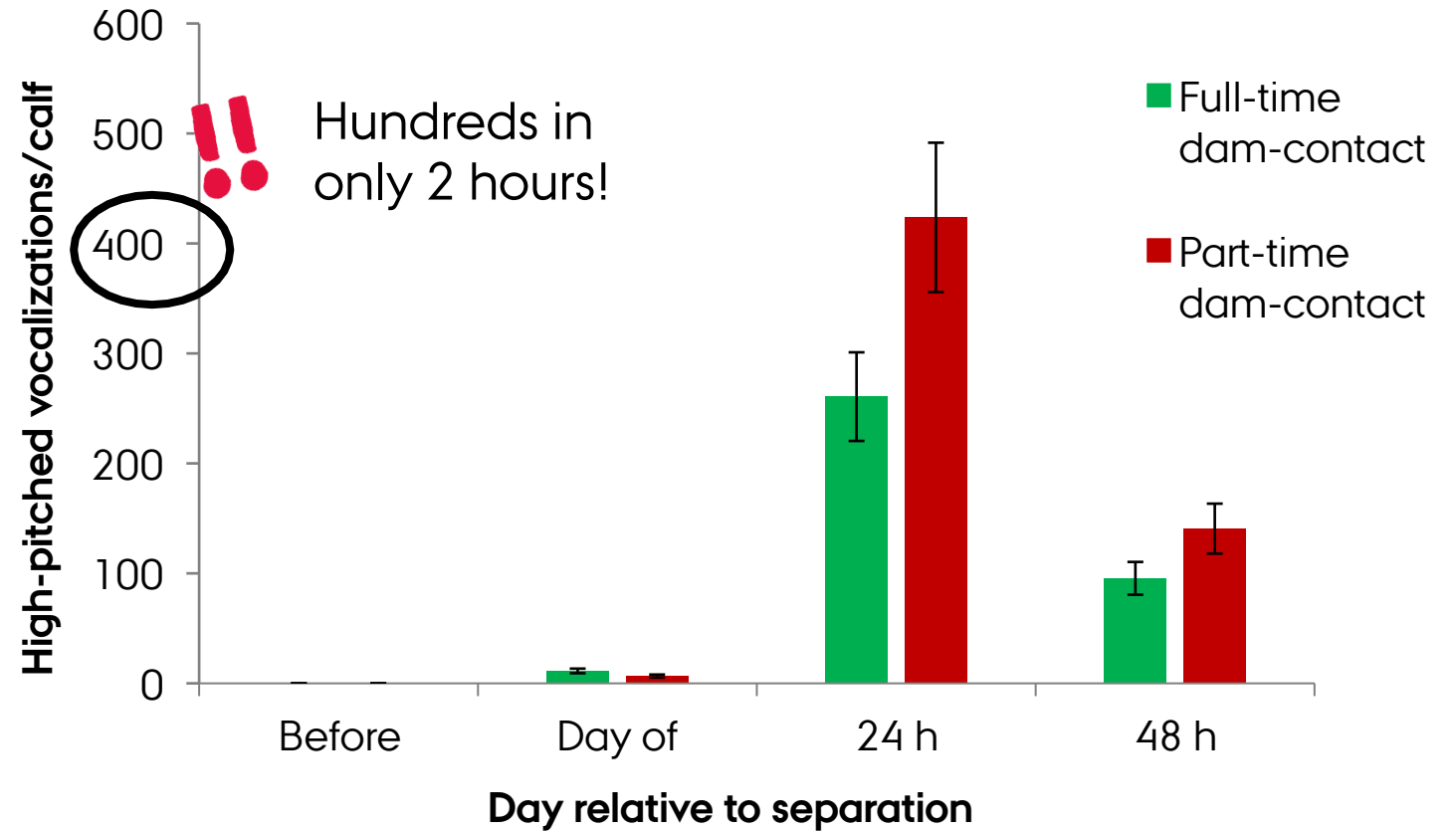


Part-time cow-calf contact:
Cows with calves for day only
(10 h), then separated at night in
free-stall housing



**Did part-time contact reduce separation
stress for *calves*? (after 10 wk)**

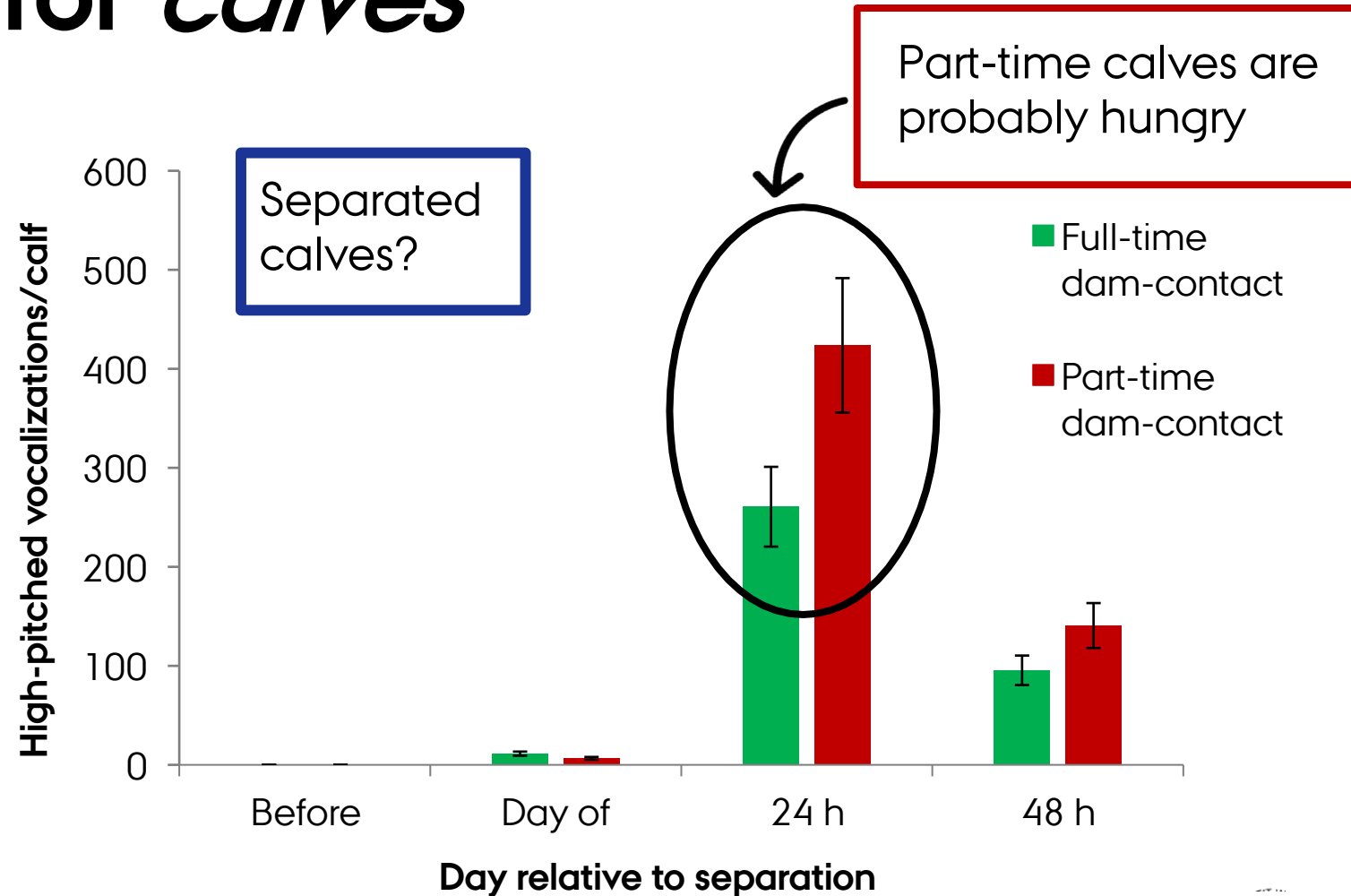
Did part-time contact reduce separation stress for *calves*? (after 10 wk)



No.. part-time contact didn't reduce separation stress for *calves*

Part-time calves vocalized more 24 h after separation.

Separated calves at birth - rarely vocalized when milk was also removed.

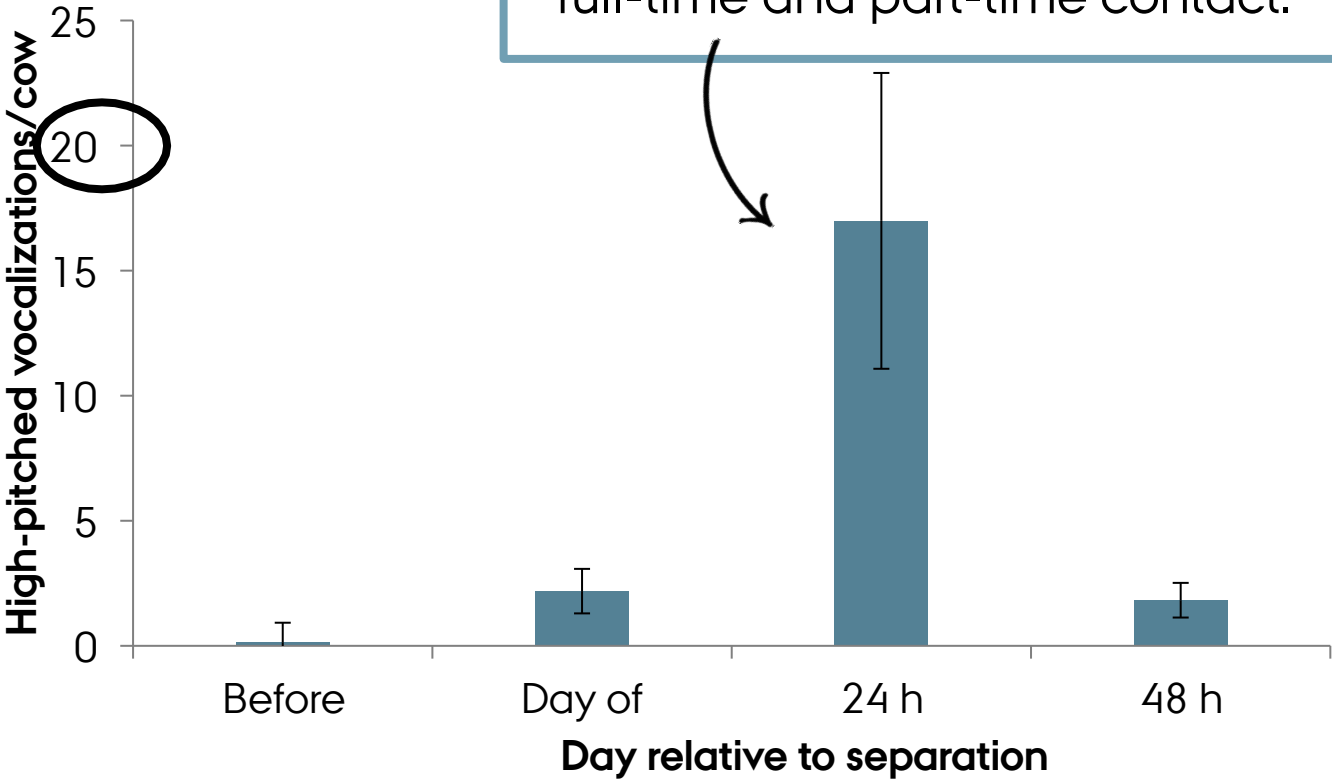


09-17-2020 05:28:01

Part-time cows returning from morning milking...



Part-time contact also did not reduce separation stress for *COWS*



A possible solution....
Part-time contact (during day or night only)



Part-time contact
did not reduce vocal response
to separation for either
cows or calves.

Part-time calves
are likely hungry

A possible solution....

Gradual or two-step weaning and separation



Gradual weaning & separation

(Week 8)

50% fence-line/dam-contact



(Week 9)

75% fence-line, 25% dam-contact



(Week 10)

Complete separation

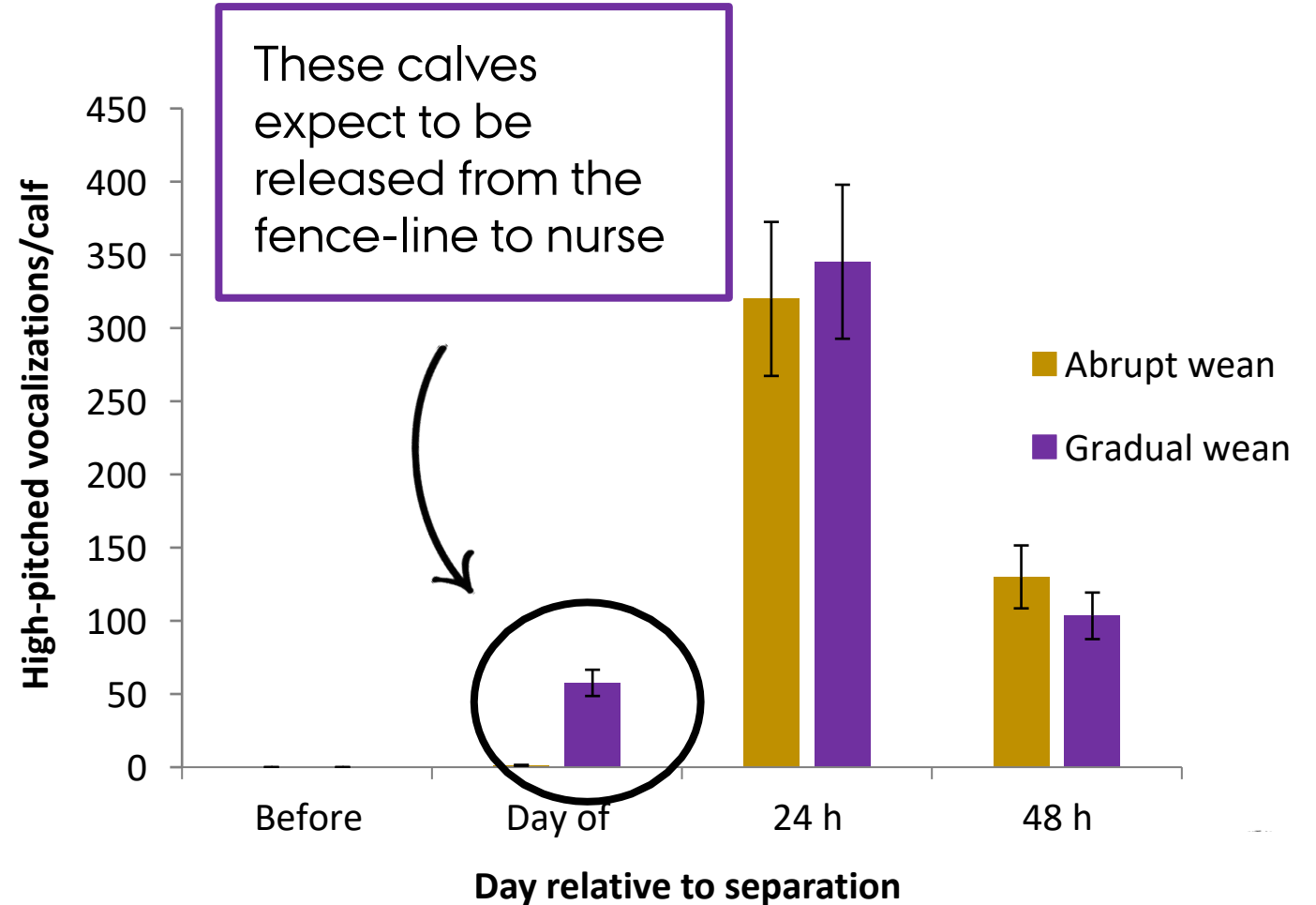
Simultaneous (abrupt) weaning & separation

(Week 10)

Complete separation



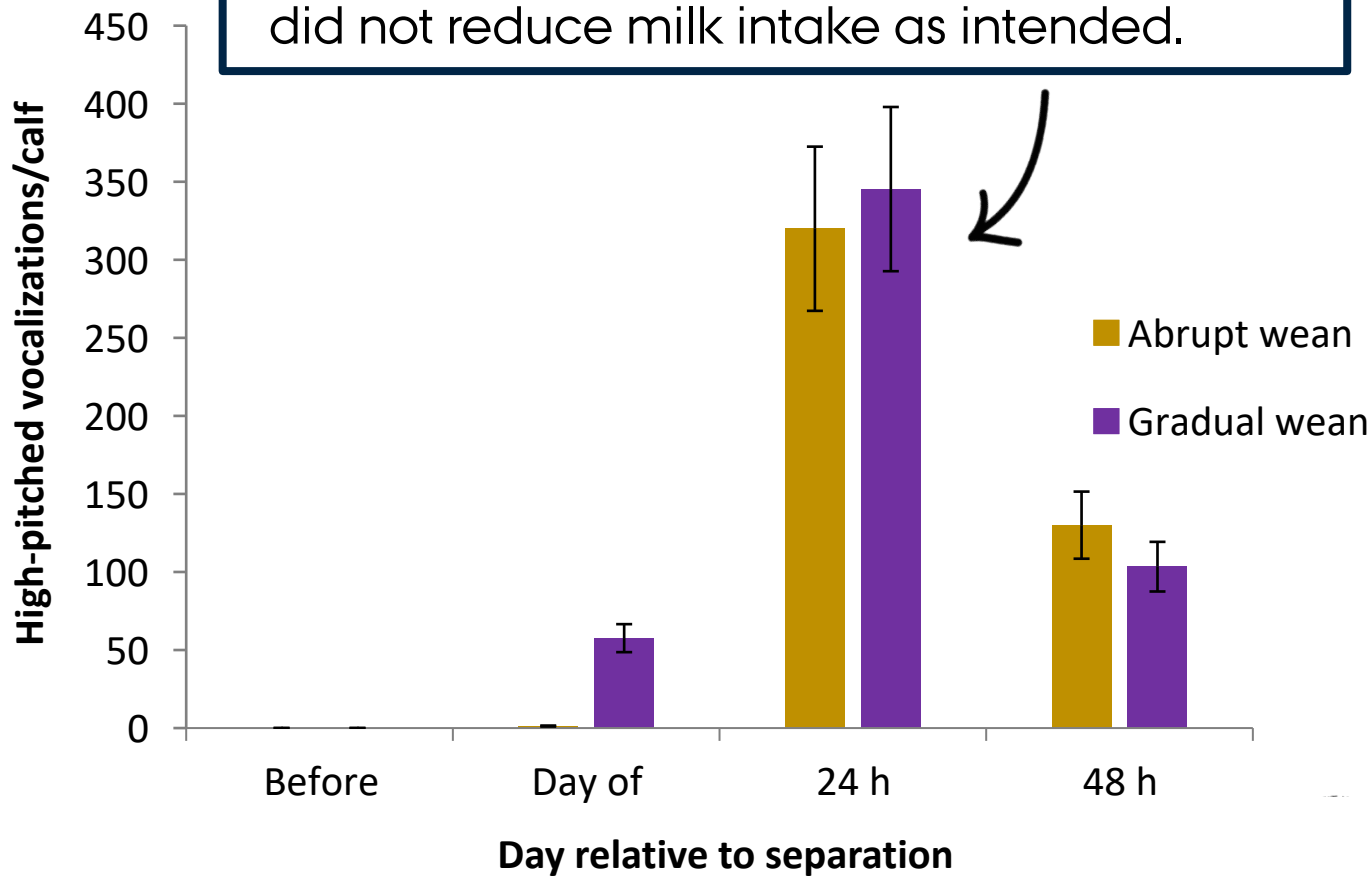
Gradual weaning did not reduce vocal response to separation in *calves*



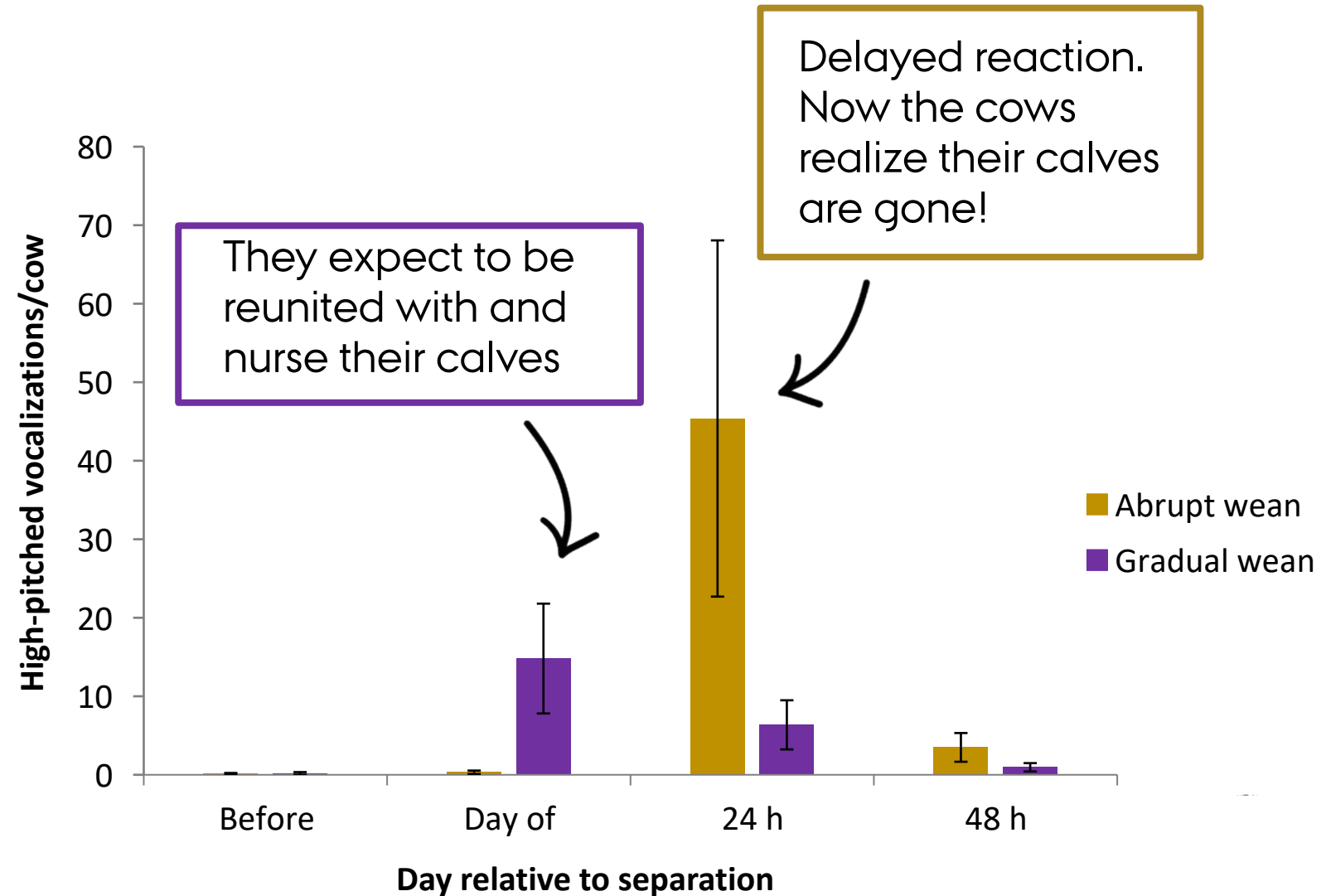
Gradual weaning did not reduce vocal response to separation in *calves*



24 and 48 hours later:
Hungry! Gradual weaning method likely did not reduce milk intake as intended.



Gradual weaning reduced peak vocal response in *cows* (but not cumulative)



A possible solution....

Gradual or two-step weaning and separation



Gradual weaning
did not reduce calf
vocalizations

Gradual weaning
reduced peak (but not total)
vocalizations of cows

A possible solution....
Gradual or two-step weaning and separation



Two-step weaning & separation

(Week 9)

100% fence-line, No dam contact



(Week 10)

Complete separation



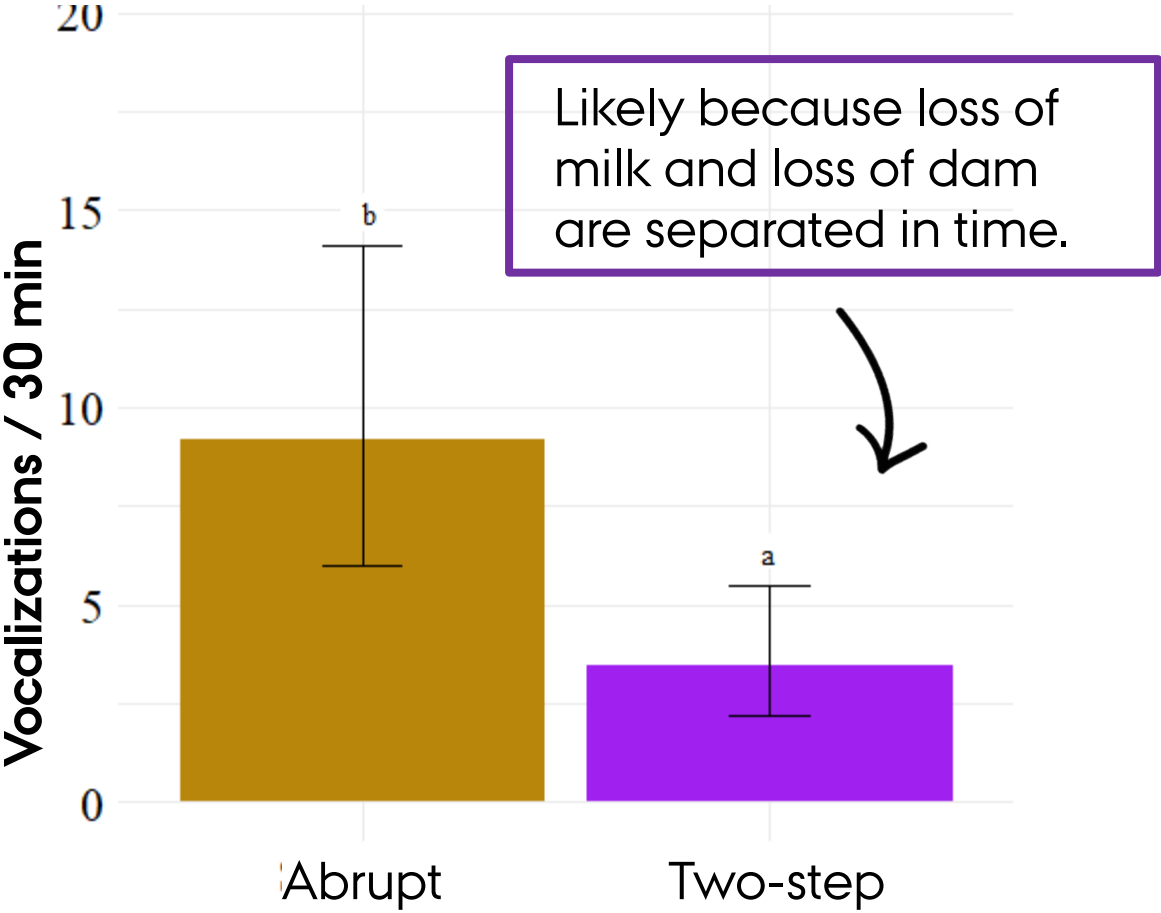
Simultaneous (abrupt) weaning & separation

(Week 10)

Complete separation



Two-step weaning reduced vocal response at separation in *calves*



A possible solution....
Gradual or two-step weaning and separation



Two-step weaning
(wean from milk,
then wean from cow)
reduced calf
vocalizations.
Cows were not
observed.

In summary:

Bonding and separation stress is a common theme from farmers.

How can we address this?

Part-time contact (day only)

did not reduce vocal response of cows or calves

Two-step weaning

(first milk removal, then dam removal)
reduced vocal response of calves



Still a lot of questions remaining...



Resilience for Dairy (R4D) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101000770



R4D Resilience 4 for Dairy

Thank you!



Univerza v Ljubljani





Other behaviors during separation: Part-time *cows* were less affected



Part-time cows spent more time lying and less time with head over the perimeter fence (less 'restless') during a 2 hour observation period.