



THE UNIVERSITY OF BRITISH COLUMBIA

Animal Welfare Program

Faculty of Land and Food Systems

Rethinking calf care for the next decade

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The Plan

- Feeding milk
- Social housing
- Benchmarking calf welfare

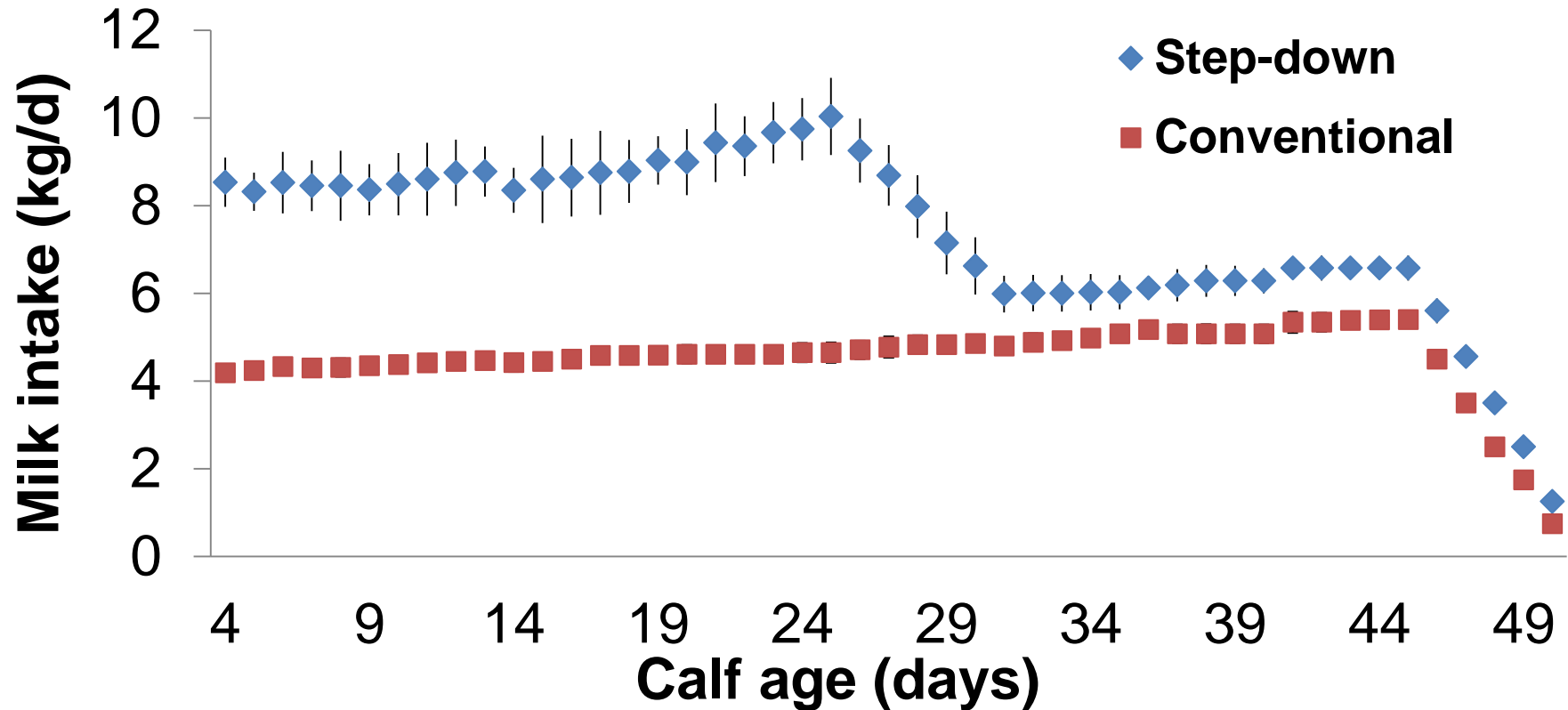


During each feeding calves spend on average 44 s drinking milk, and 6 min sucking on the empty bucket

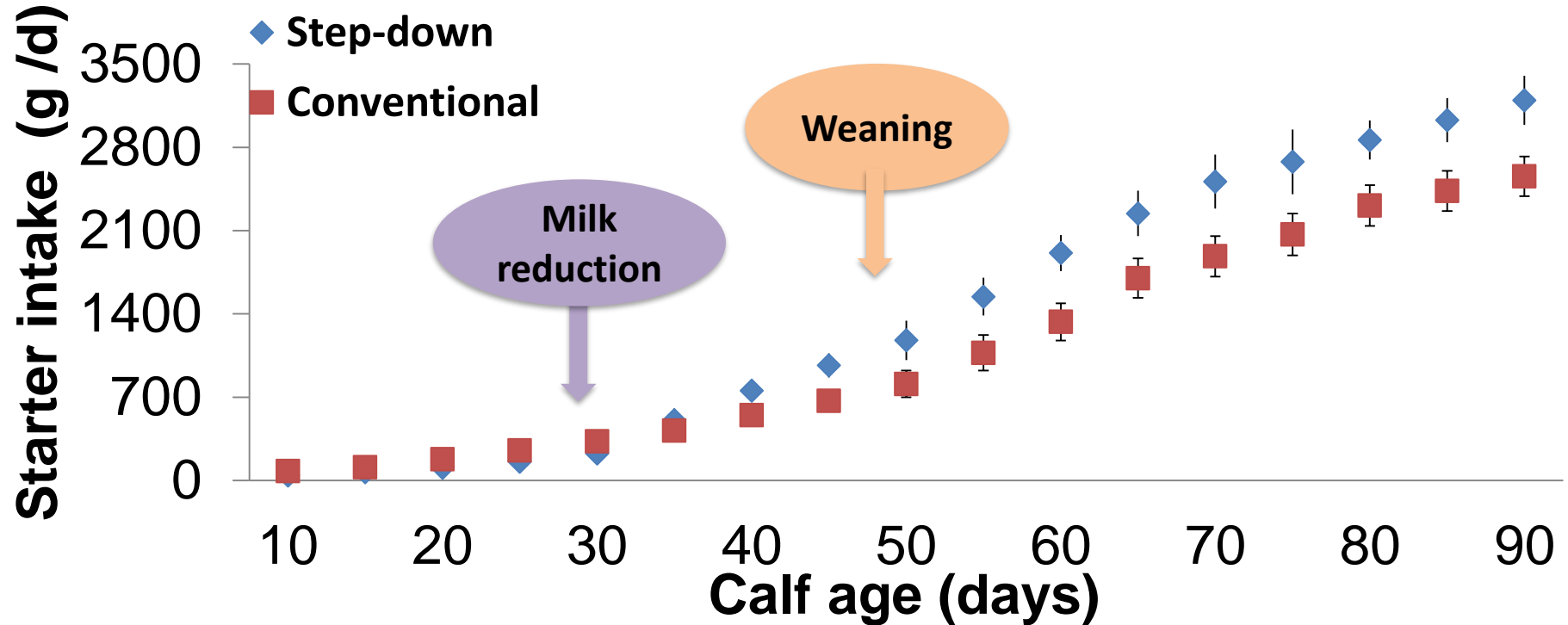
When provided free access to milk via a teat, calves spend on average 47 min drinking milk, and typically spread this feeding time into 6 to 10 milk meals.



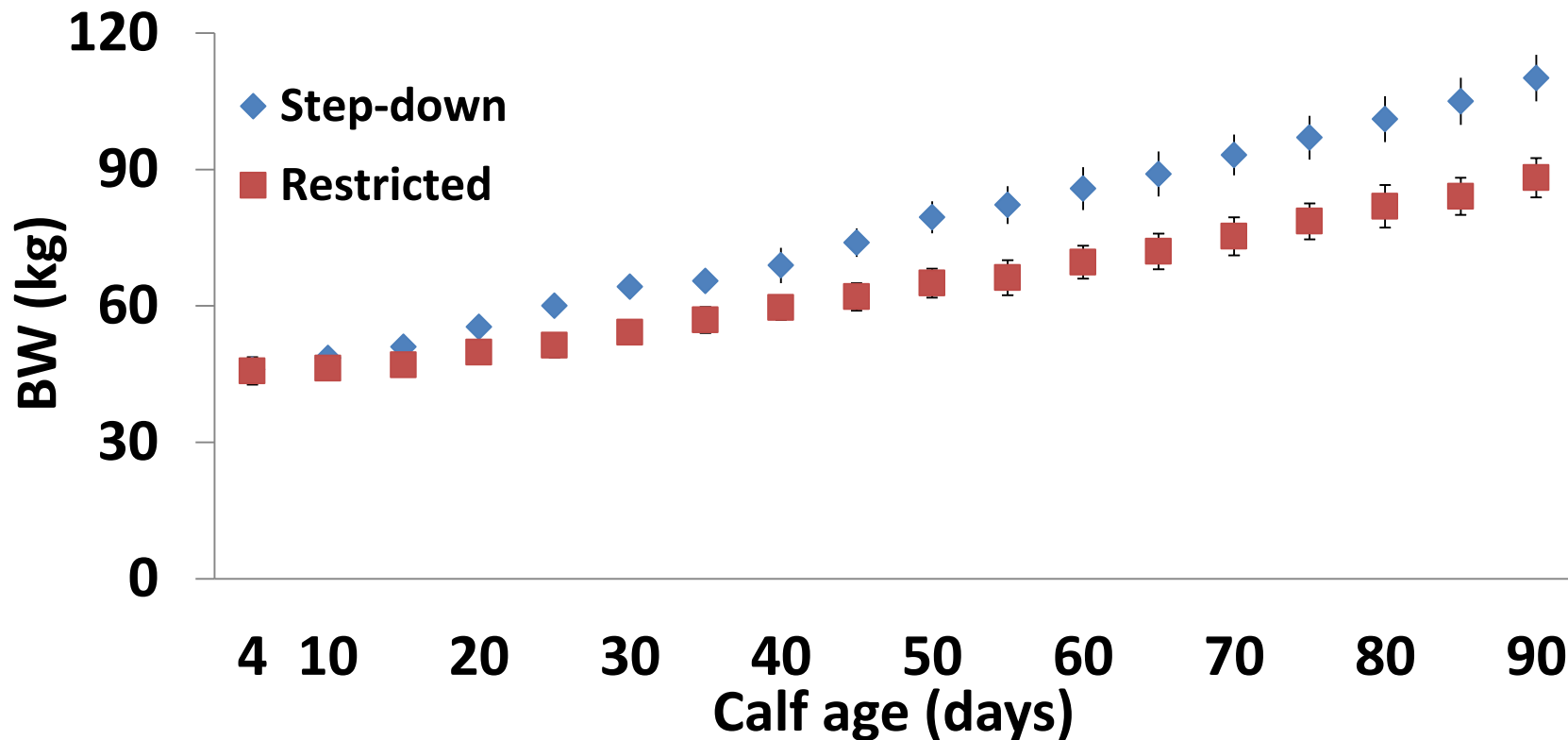
Step-down weaning



Step down improves starter intake



More milk and step down improves body weight





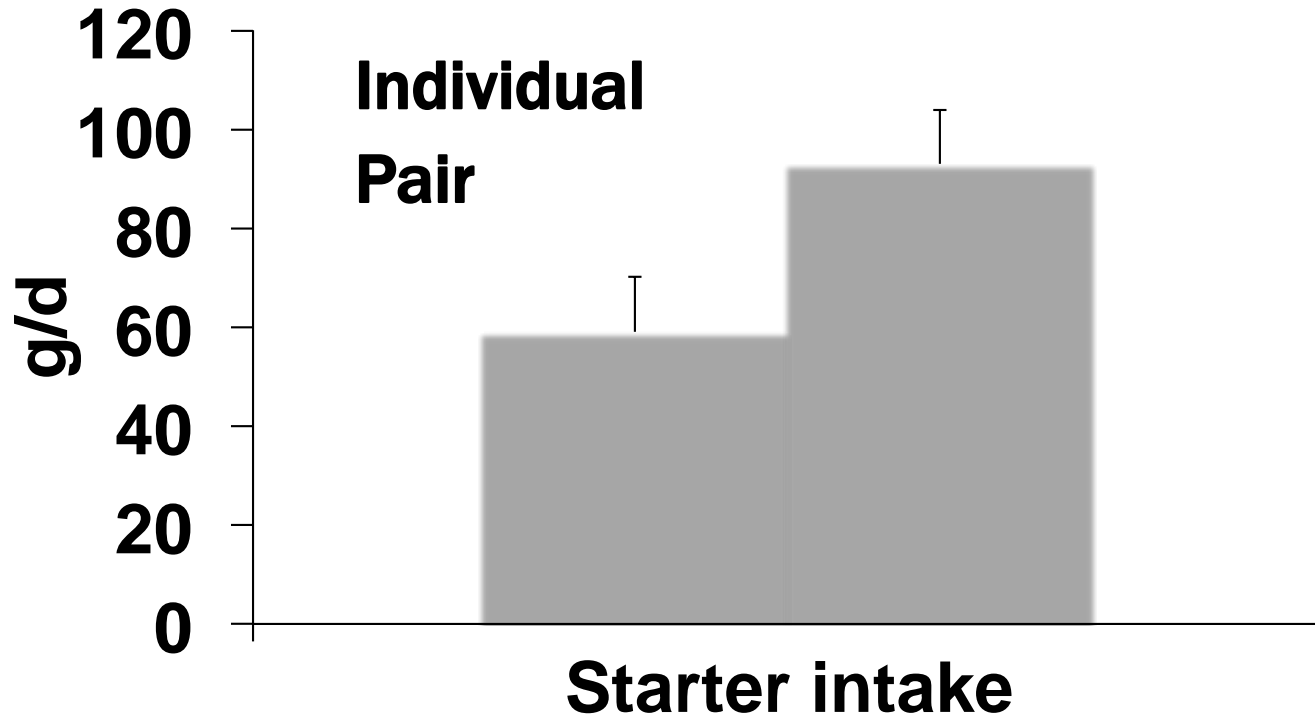
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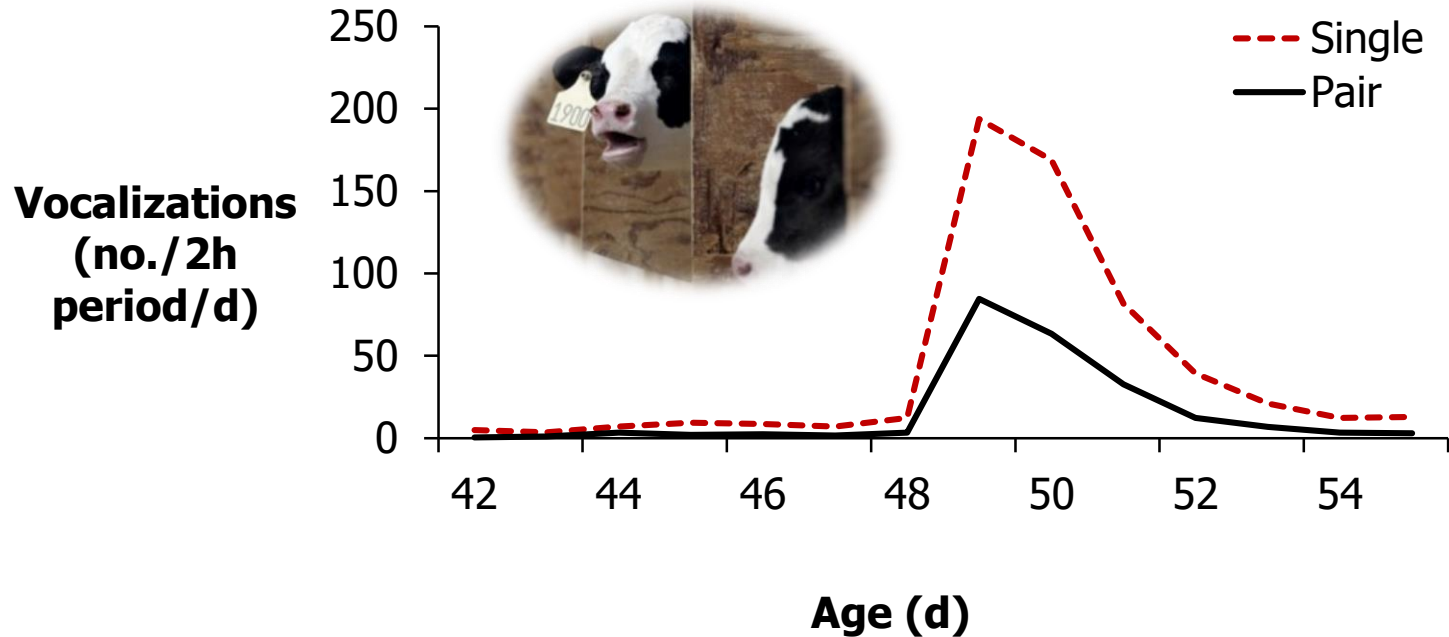
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8144

Feed intake during milk feeding phase

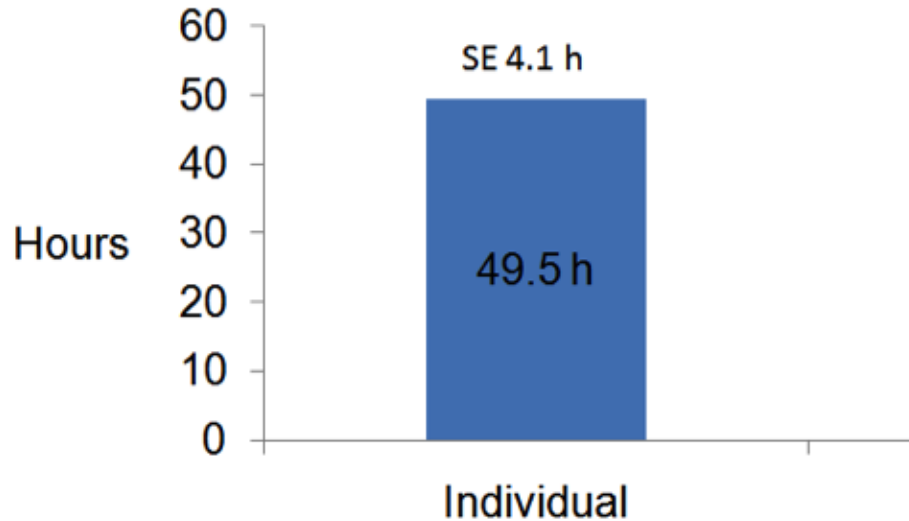


Weaning distress reduced when calves are pair housed

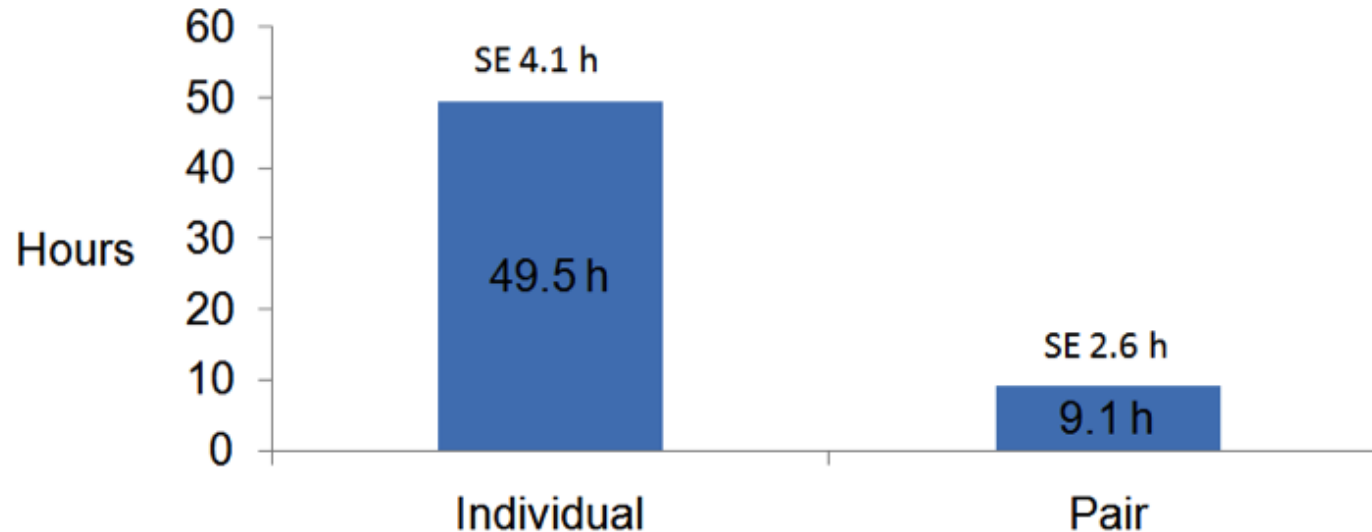




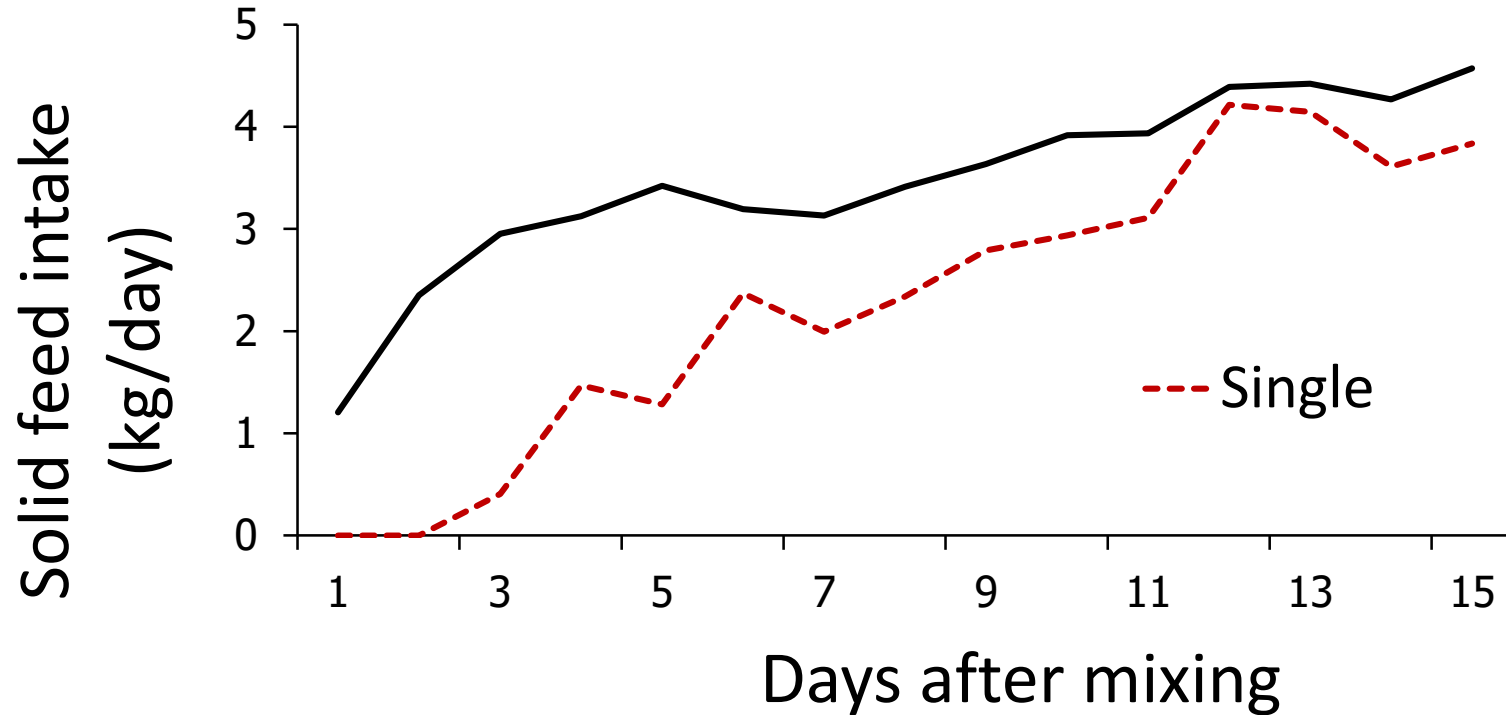
Latency to start eating grain



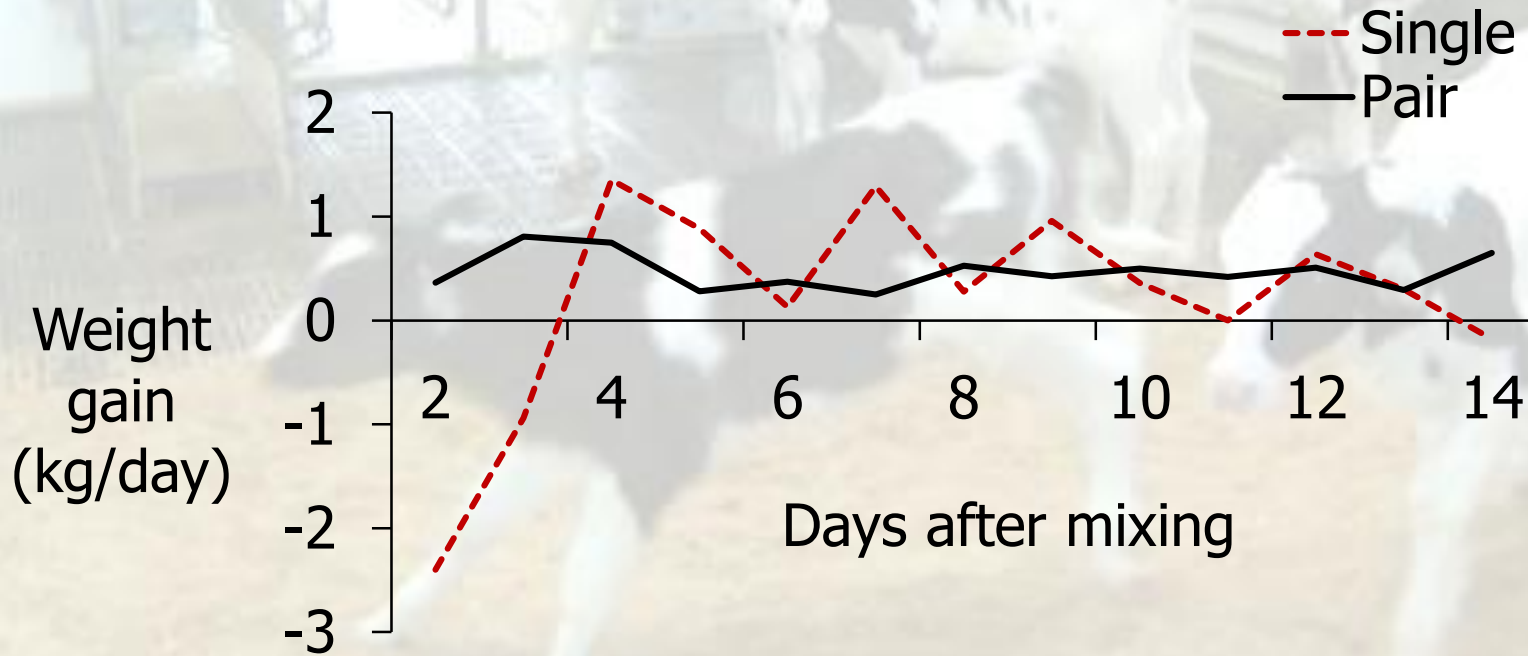
Time to start feeding after mixing is more rapid when previously pair housed



Feed intake after weaning and mixing



Individually housed calves gained less weight in the days right after mixing

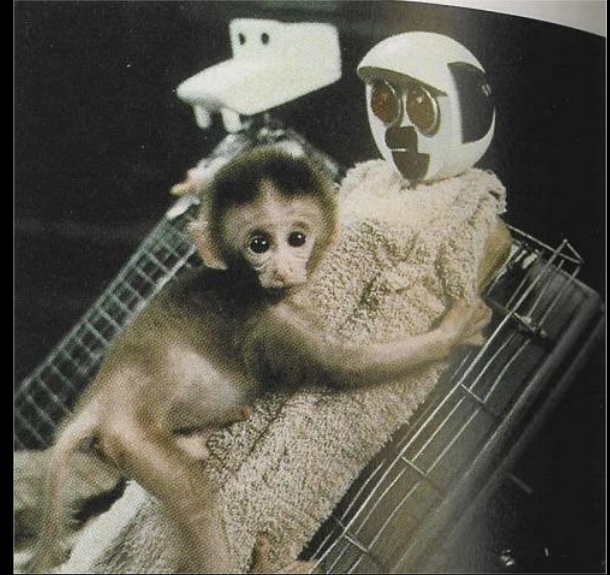


Latency to socially
interact

Social interactions

Social isolation affects cognitive development

- Cognitive rigidity
- Neophobia
- Decreased synaptic plasticity



Harlow et al. 1965. PNAS 54:90-98

Reviewed by Fone and Porkess, 2008

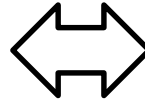


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Learning task

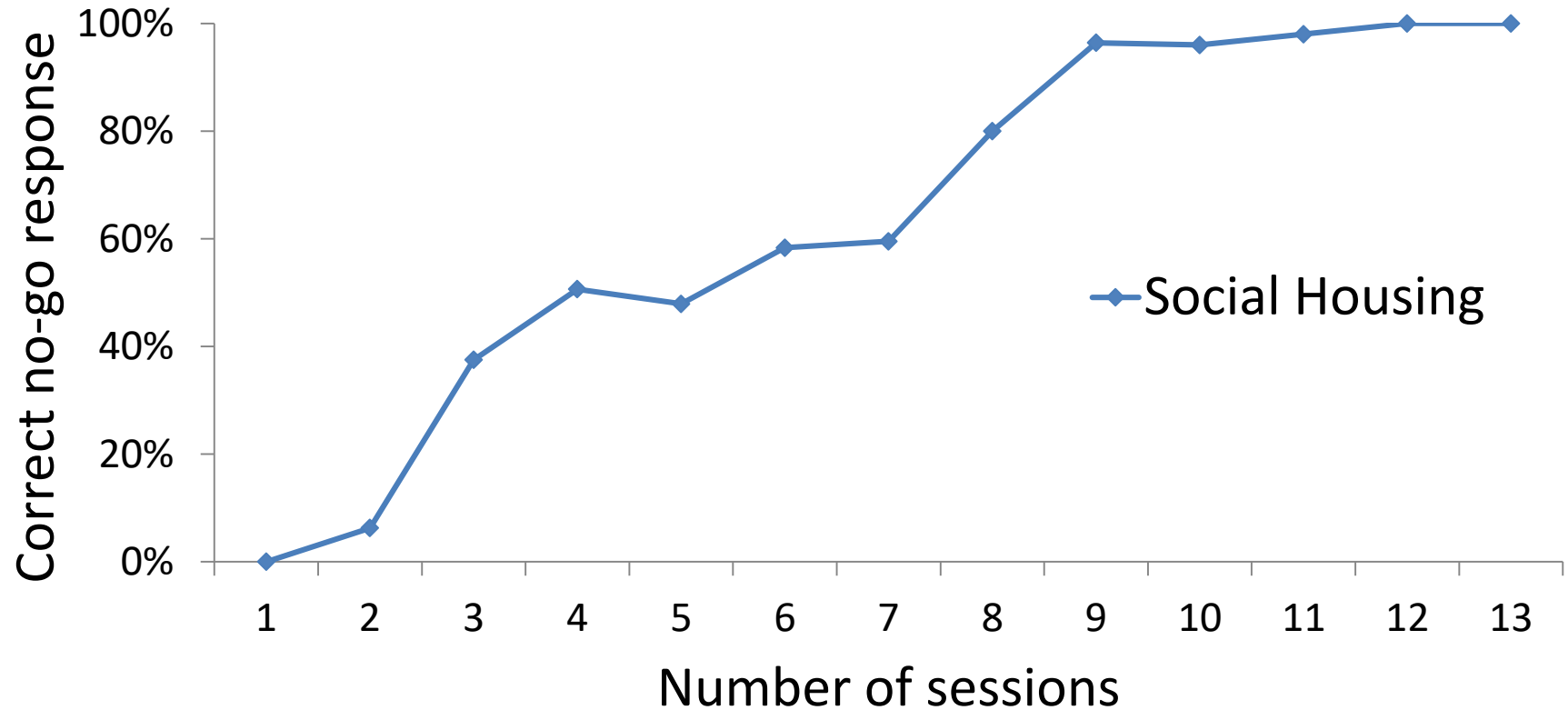
Positive
approach
for
milk reward



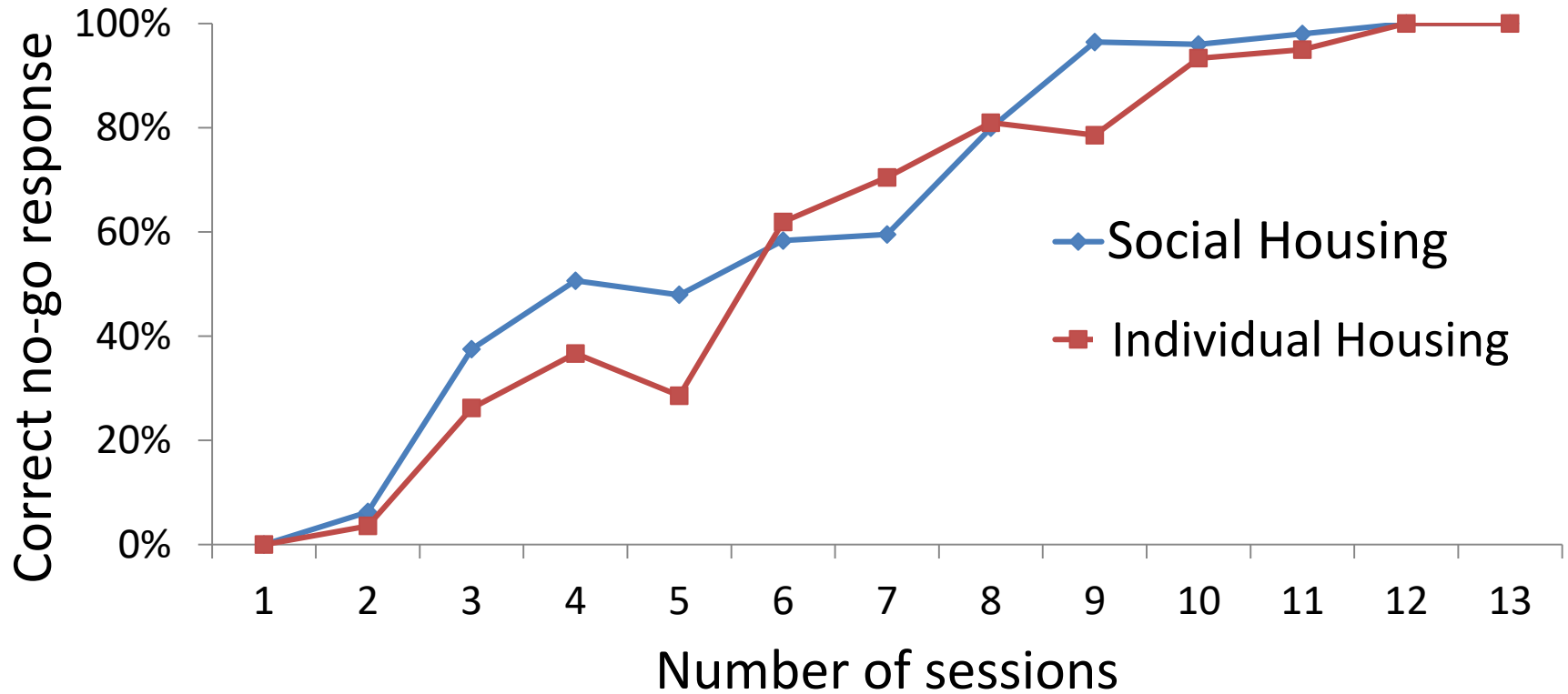
Negative
do not approach;
time-out
punishment



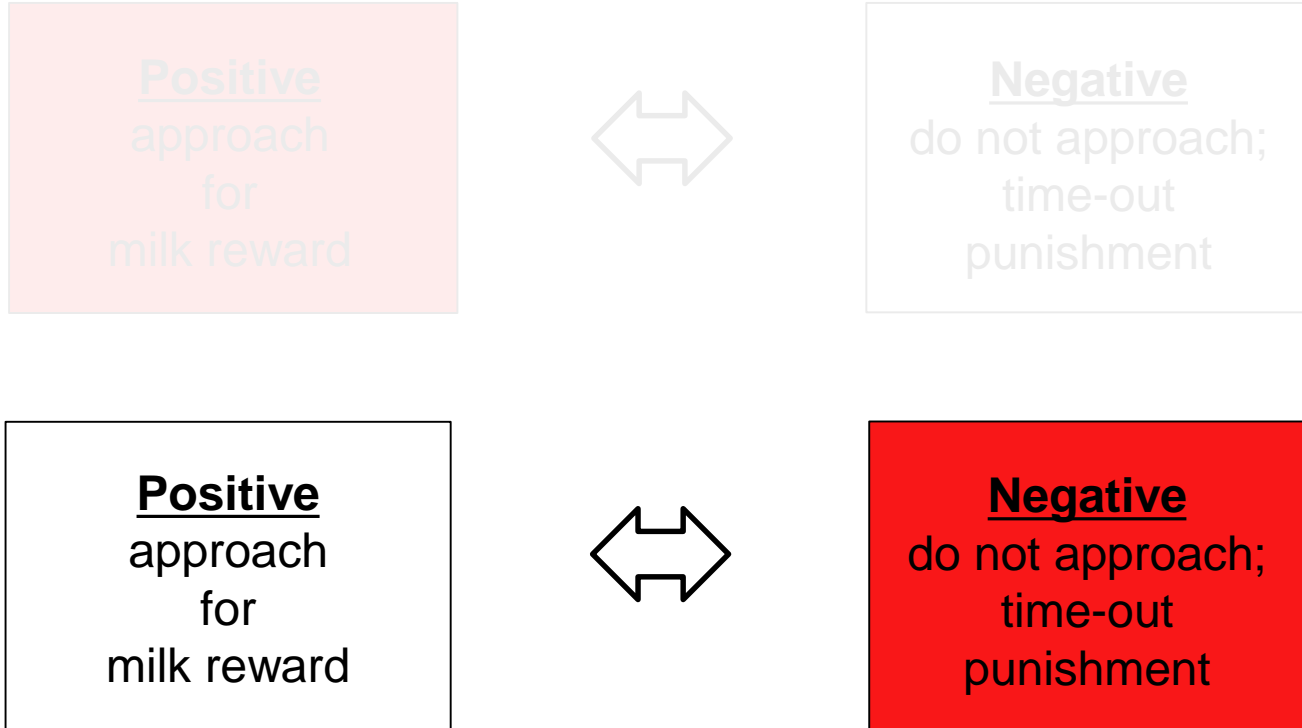
Discrimination learning



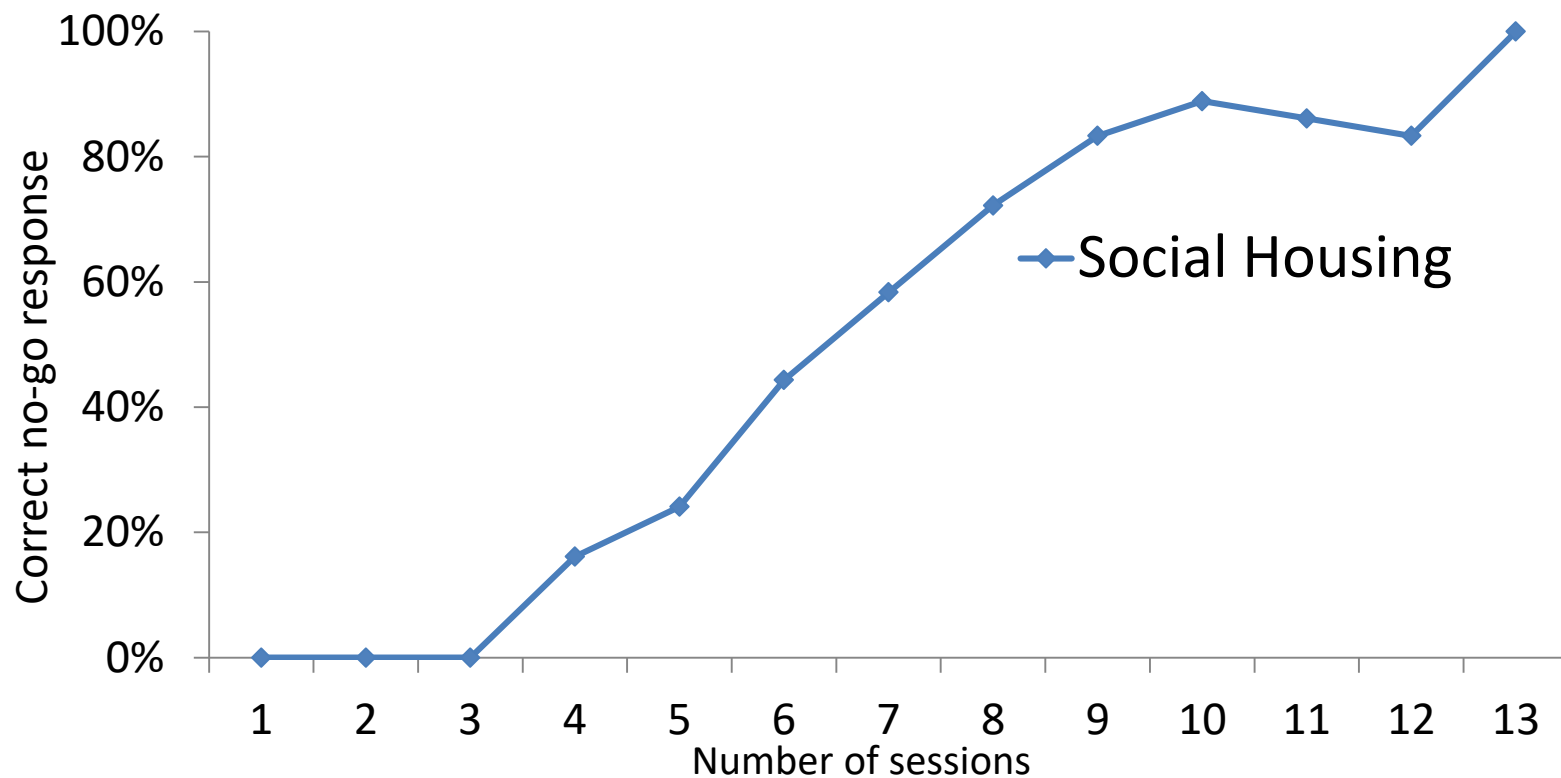
Discrimination learning



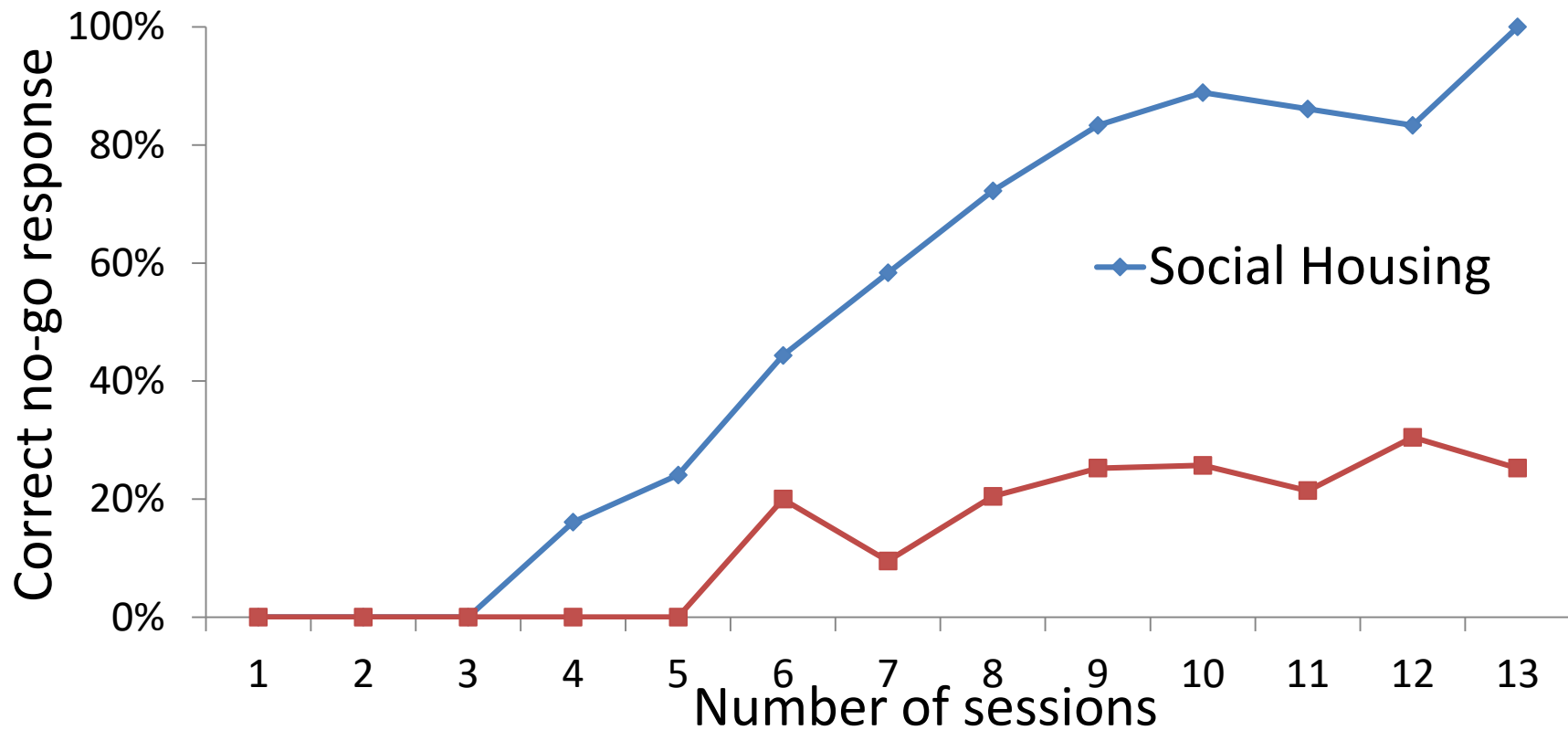
Reversal learning task



Reversal learning



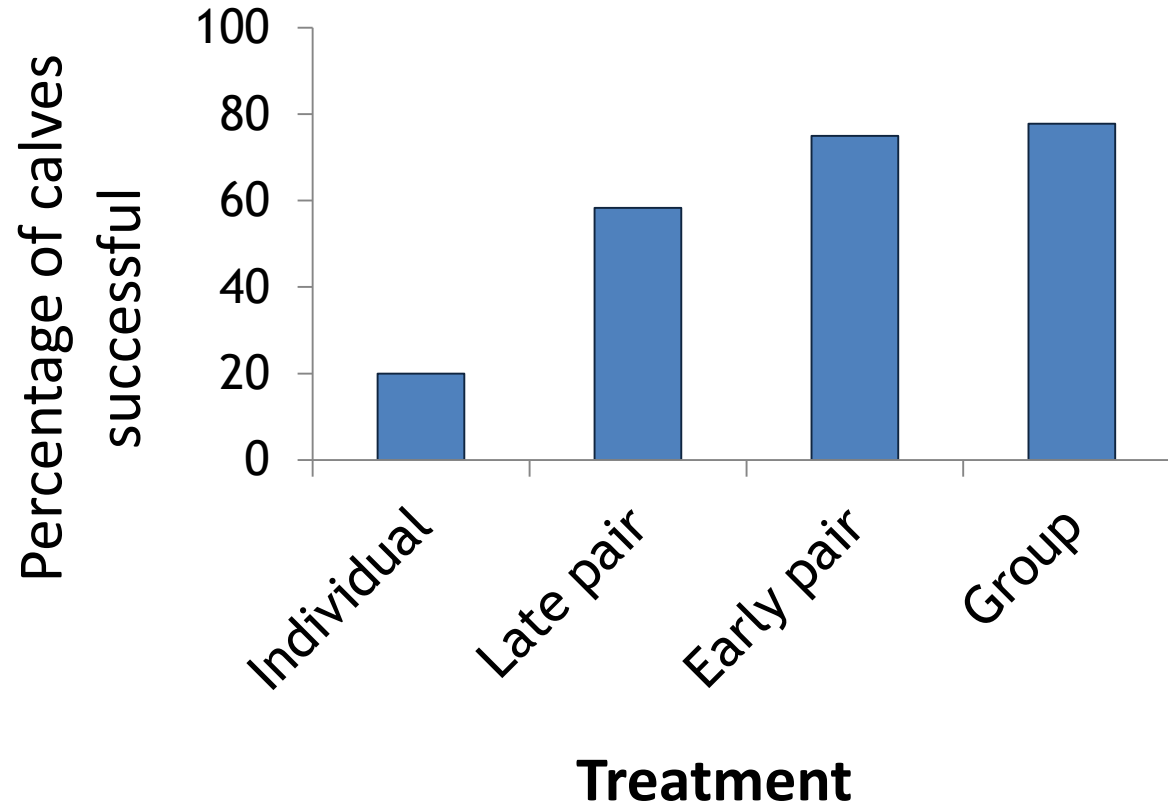
Reversal learning



What type of contact is needed?

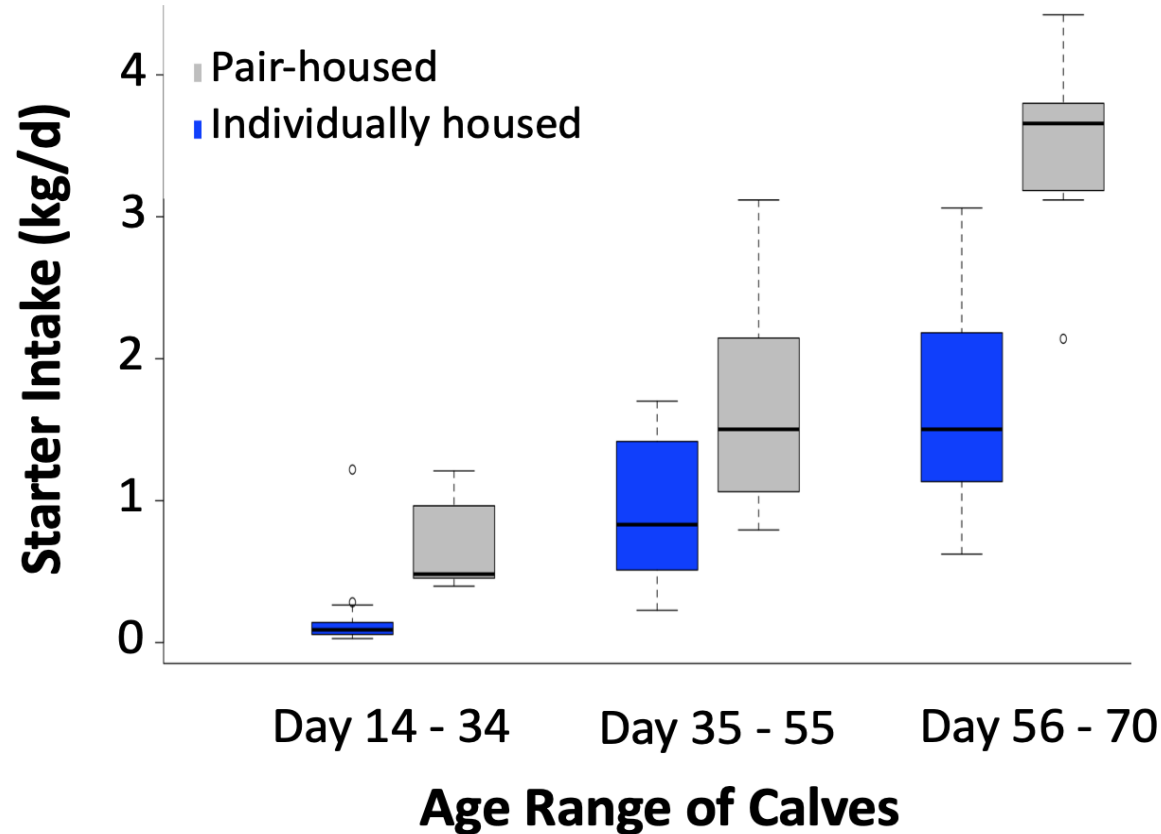


Reversal learning





Pair housed calves consume more starter





Benchmarking Calf Performance on British Columbia Dairy Farms



Key Components

- Biological data for measuring calf outcomes
- Interview data for measuring farmer attitudes
- Benchmarking reports are delivered in coordination with veterinarians

Giving producers their evidence

- Identify problems
- Develop solutions
- Change practice



1. The problem – getting research applied on farms
2. Example – Growth in calves
3. The benefits – farmer interest, improved welfare veterinary involvement

Value of Benchmarking

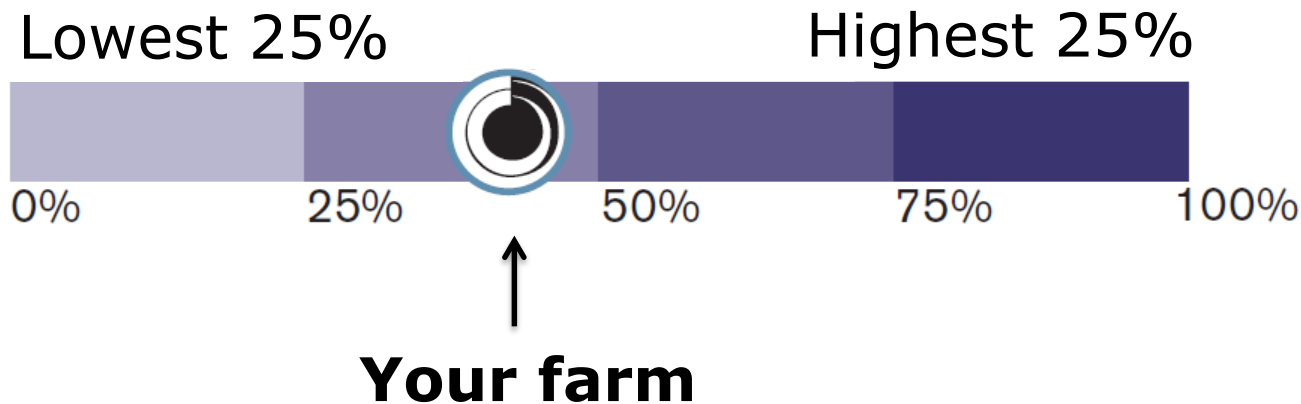
“I’m just going to say, ‘Just tell me where I am
“It gives you a real honest opinion of where you’re at...
and tell me how I can do better. I don’t really
everyone who I’ve talked to who has ever
care if I’m at the top, tell me how I can do
benchmarked is always lower than what they think.”
better.’”



Dairy Farmer



Giving farmers their evidence

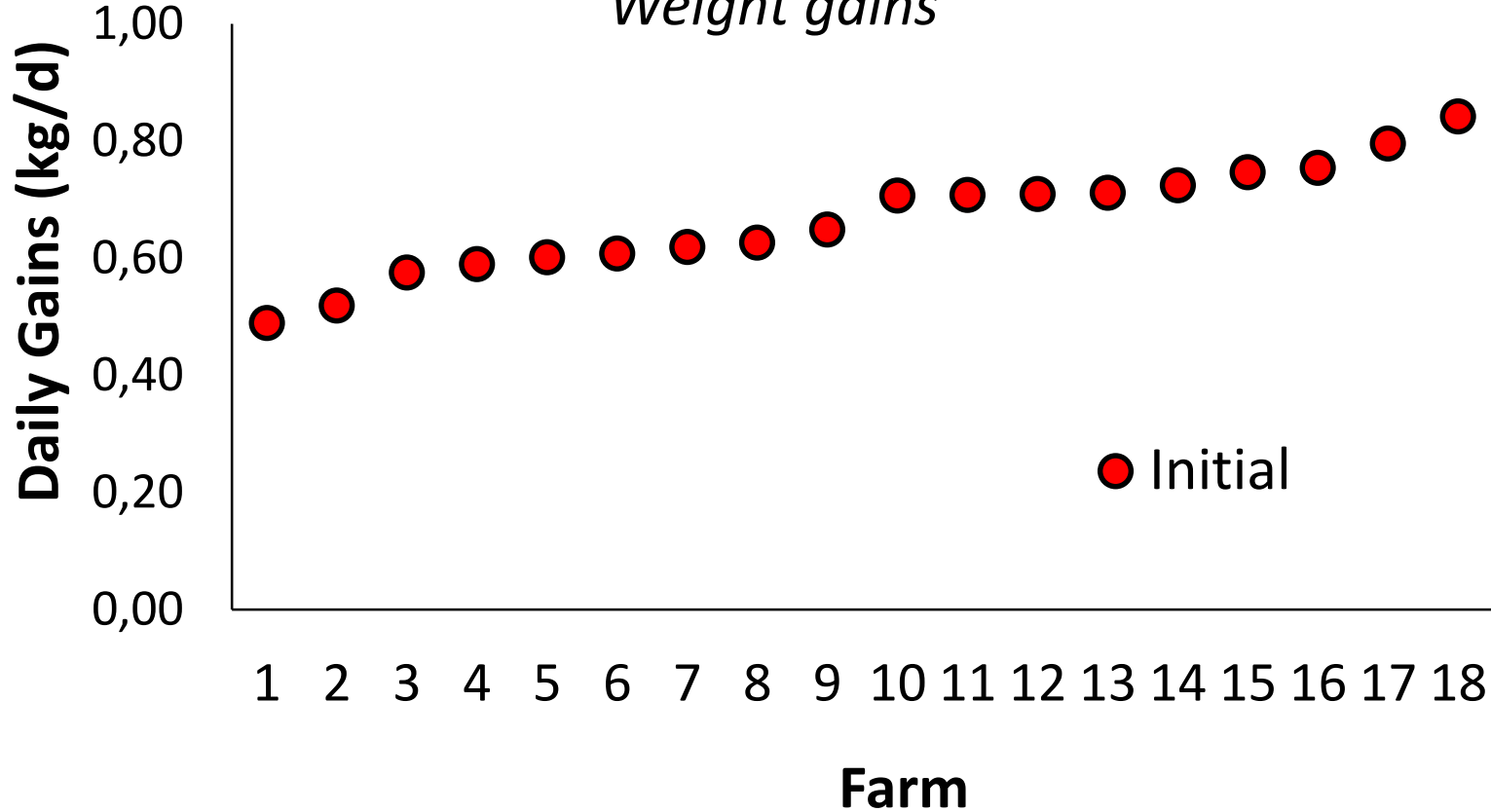


Examples of changes made by participants:

- Measured colostrum quality
- Increase milk allowance (up to 12 L/d)
- Step-down weaning
- Providing forage before weaning
- Increase teat availability in group pens

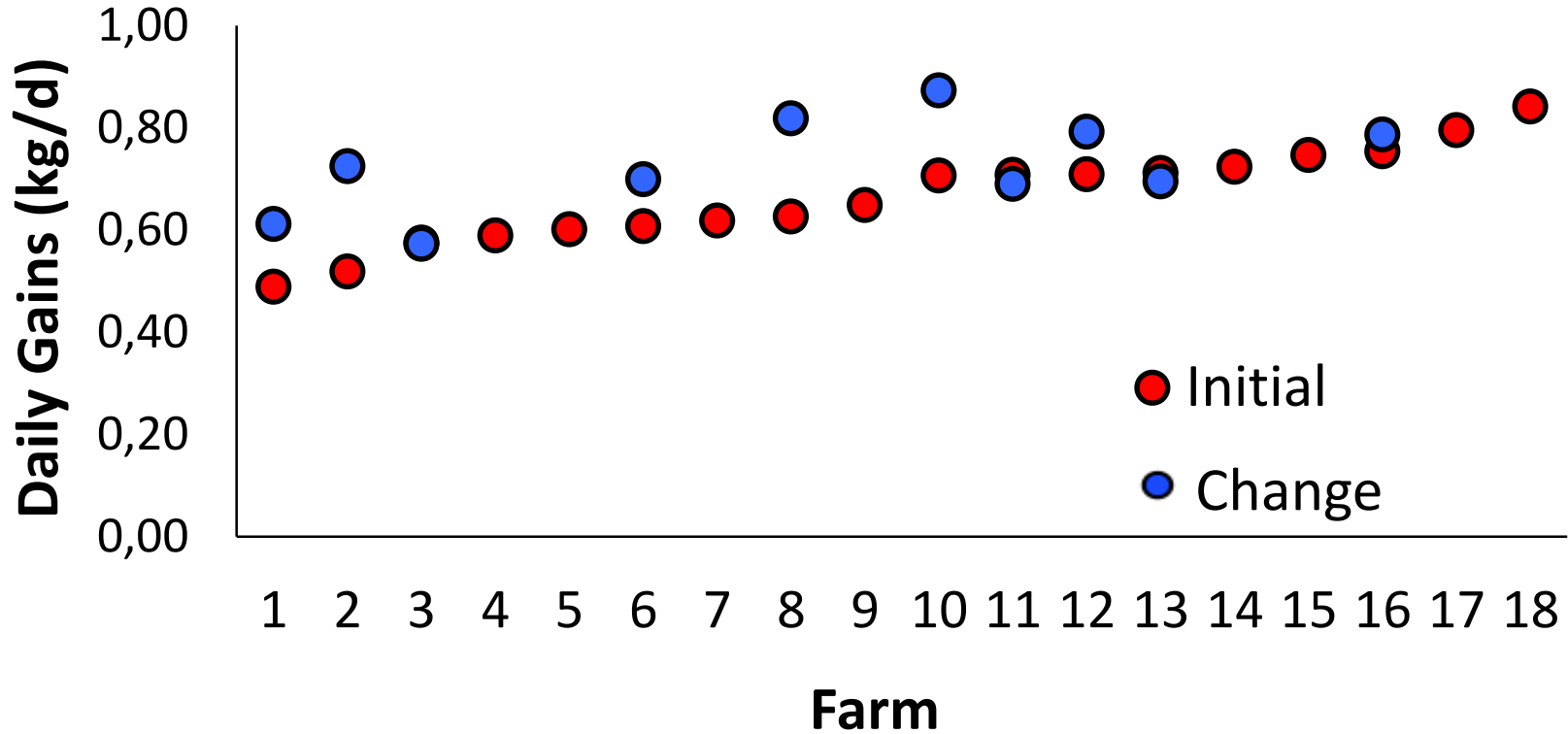
Does benchmarking work?

Weight gains



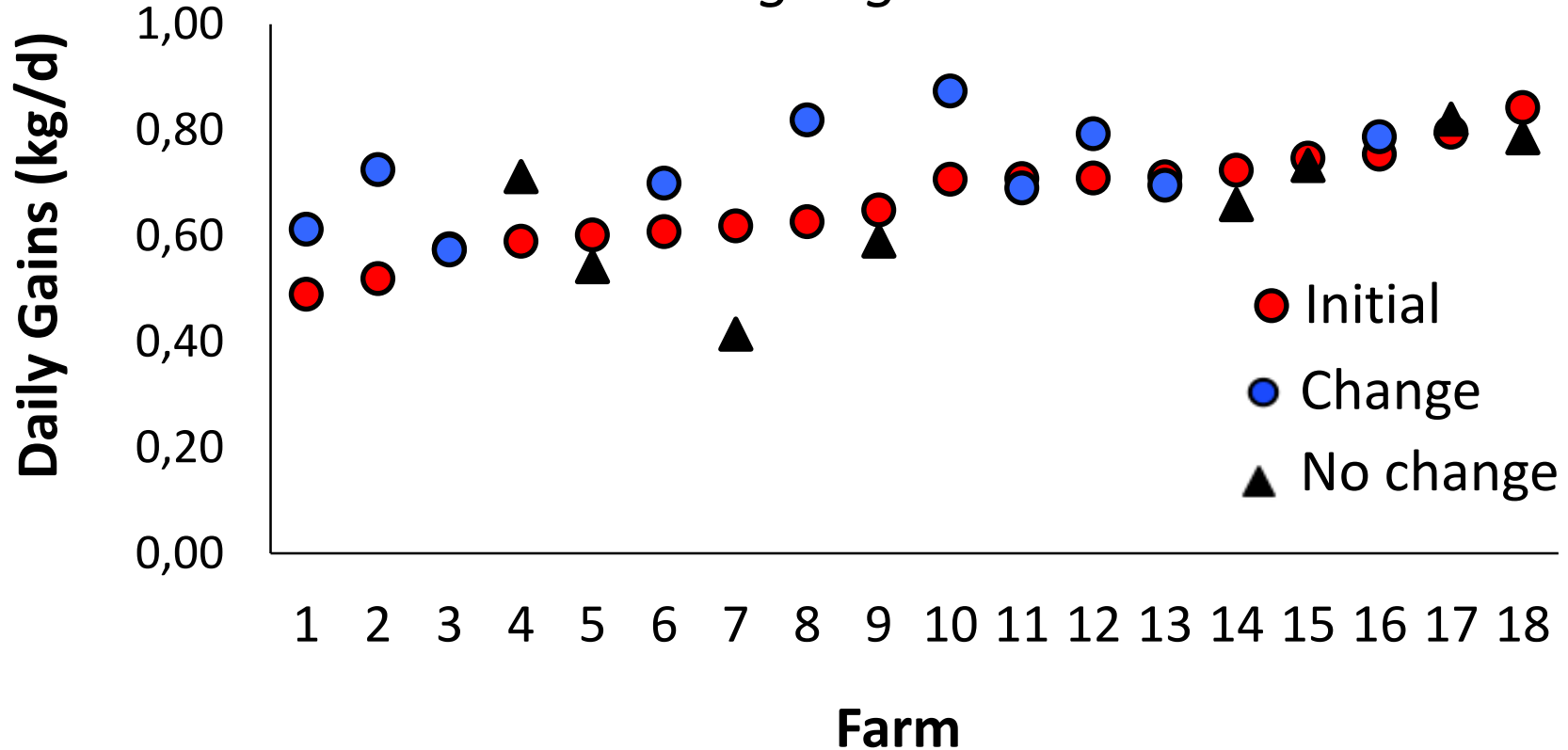
Does benchmarking work?

Weight gains



Does benchmarking work?

Weight gains



Value of Veterinarians

“Any time you talk (to a veterinarian) about things...you sort of get motivated to do it even better...you become more conscious of it...you pick up stuff...”

Dairy Farmer



Take home messages

- *Teat feeding is a must! Feeding at least 8 L a day is a must!*
- *Individual housing impairs cognition, makes calves fearful*
- *Social housing has benefits and helps prepares the calf for the future.*
- *Benchmarking can help motivate change on farms – on going work to address how this works for calf issues*
- *Engaging farmers and veterinarians may provides insights into identifying barriers preventing change*

Thank you!



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