

CALVES WITH FRIENDS...

Exploring Social Contact in Calves

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Providing Evidence-Based Livestock Solutions

Background

Defra has recently announced that the first of the Animal Health and Welfare Infrastructure Grants will be available in the form of the **Calf Housing for Health and Welfare Grant**. These grants will be for large infrastructure projects that will improve the health and welfare of calves by co-funding new or upgrading calf housing that will improve **social contact** and the ambient environment.

Maternal Separation

In most systems in the UK dairy industry, calves are exposed to maternal deprivation as they are separated from the dam soon after birth. This allows intakes of colostrum and milk to be carefully monitored and the sale of milk.

Early separation, before strong maternal-offspring bonds have been formed is understood to be less stressful for both cow and calf [1].

Housing options

On leaving the dam, calves may be reared in individual pens, pair-reared or group housed during the milk feeding period. A perceived ease of calf management has resulted in many dairy calves being reared individually.

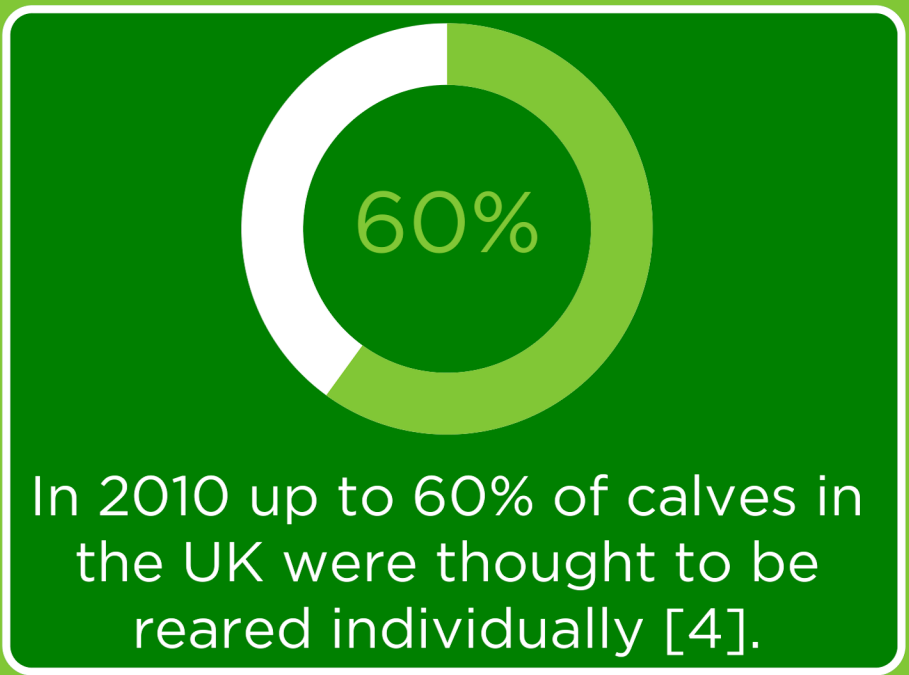
Farmer motivations for individual housing include:

- perceived reduction in disease transmission between stock, when compared to group housing
- easier and earlier detection of health issues
- reduced cross sucking between calves
- reduced competition for resources, such as milk, feed and desirable resting space.

How Do We Know Calves Prefer Full Social Contact?

Social isolation is thought to be stressful for calves, and when tested in an operant conditioning study by Holm et al (2002) [2] calves were shown to work hard to gain full social contact over partial contact through pen walls. Indicating that social contact is a valuable resource to a calf.

Calves, as young as 2 days old, will interact with other calves, when provided with the chance to do so [3].



Introduction

Heifer calves are the future of most dairy herds and you don't get a second chance to get it right.

Whilst the impacts of early life nutrition on cow productivity are well understood, the impact of other life experiences are not so well recognised.

This review summarises information and research that highlights the importance of understanding how social enrichment will benefit the welfare and productivity of livestock in our care.

Research Study: To investigate the effect of early social environment and age of pairing on the performance and behaviour of young calves.

Methodology

Supported by:

40 female H/F calves were allocated at birth to one of 3 housing treatments:

- individual (8 calves)
- pair-housed from d5 (8 pairs)
- pair-housed from d28 (8 pairs).

All calves were stocked at a density of 2.59m² per calf through the trial period.

Calves were weaned gradually over a 3d period (d48 to d50).

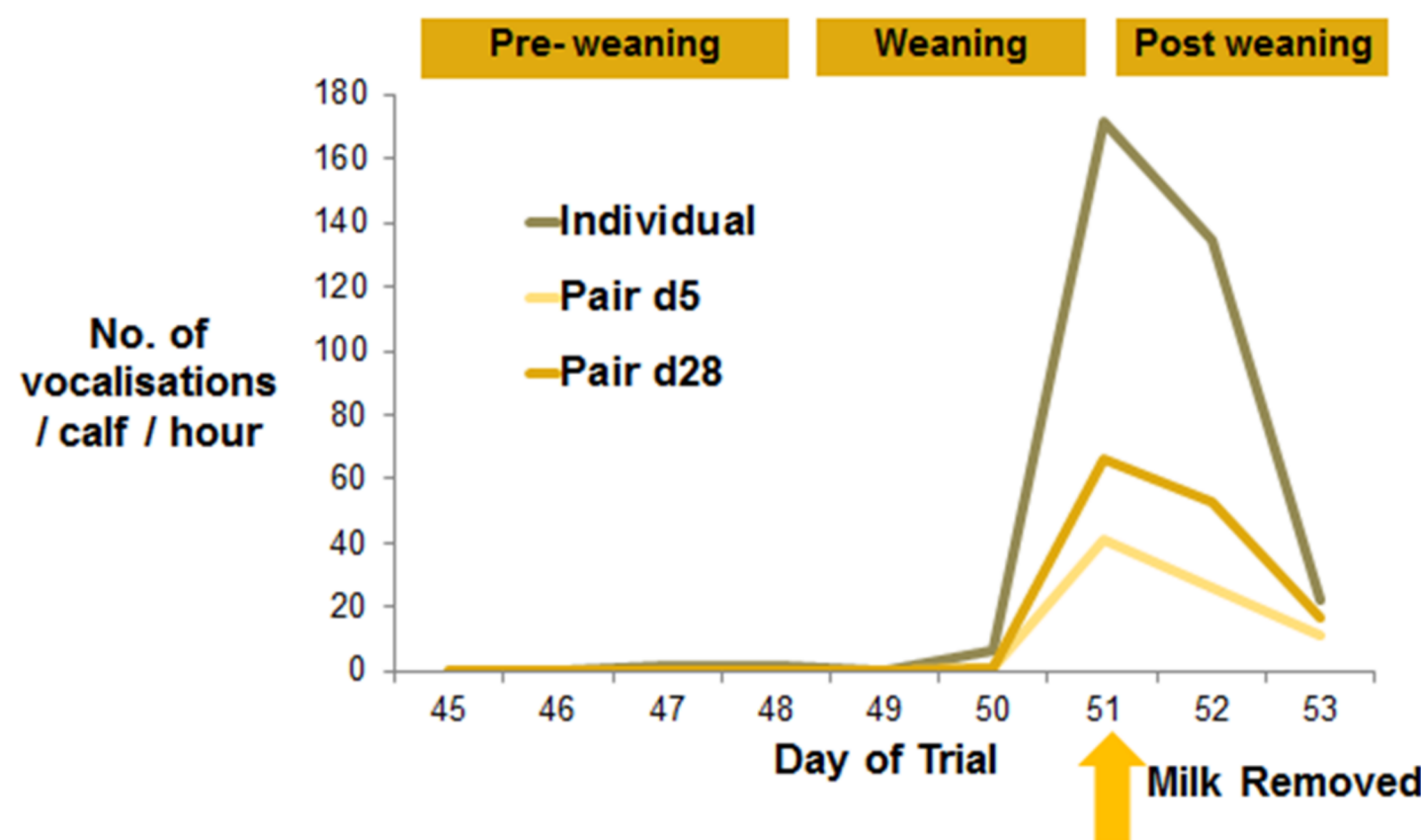
All calves were regrouped to a pen of 5 on d55.

Data collected included:

- Weights, Concentrate intakes, Health observations, Behaviours & Weaning observations.

Results

- Treatment did not have a significant effect on feed intake, growth rate or health.
- There was a significant effect of treatment on vocalisations during and post weaning.



Bolt, S. L., Boyland, N. K., Mlynski, D. T., James, R., & Croft, D. P. (2017). Pair housing of dairy calves and age at pairing: Effects on weaning stress, health, production and social networks. *PLoS One*, 12(1), e0166926.

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Benefits of Social Contact

Increases in feed intakes in grouped calves has been attributed to a concept called social facilitation. This is a social phenomenon in which being in the presence of others improves an individuals task performance.



The concept of social support is “the ability of social partners to modulate or down-regulate the impact of stressors on the recipient’s homeostasis” as defined by Rault (2012) [5].

Social support is considered responsible for individually reared calves vocalising more at weaning than group reared calves [6].



Research indicates greater feed intakes for group-reared animals following weaning. Social learning is thought to be responsible for them accessing feed much quicker than individually reared calves on re-grouping [6].

Play behaviour, a positive indicator of welfare, increases with pen size, and occurs more often when calves are grouped [7].

Individually reared calves have a lower social status in the herd, whilst group housing allows for better development of social skills. These calves are more confident and show less fear response to humans [8]. As this continues throughout their lifetime, group reared calves are likely to be easier to handle, less stressful for both humans and stock.

Conclusion

- Contrary to popular belief there is evidence that calves can be group reared (in small homogeneous groups, in association with good husbandry and management) without detriment to health or production. Indeed long-term benefits in welfare and production might be achieved through providing social contact during the early rearing period.
- However, the mode of feeding should be taken into consideration or enrichment provided to reduce cross-sucking. And provision of enough resources i.e. feed space is essential to avoid competition.