

Weaning strategies

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Abrupt weaning is a source of stress for the cow and calf. Weaning breaks the maternal-offspring bond and removes milk from the calf's diet. In a natural environment, the cow would initiate weaning gradually by refusing the calf access to suckle; this would occur at a later time than that which is generally practised by suckler producers.

Weaning stress is often compounded by other husbandry practices occurring at the same time, for example, change of environment, change of diet and transport/selling. This stress often results in reductions in liveweight gain and marked increases in physical activity including pacing, vocalising and a reduction in the time spent feeding during the post-weaning period.

Two-step weaning

It has been reported that weaning distress can be reduced by implementing pre-weaning treatments, including fence line separation from the dam and anti-suckling devices.

Fence line weaning

Fence line weaning involves cows and calves being separated by a fence, for over four days, before total separation. This allows the cows and calves to still see, hear and smell one another and where possible, have nose-to-nose contact.

A study carried out in America investigated the effects of fence line weaning on calf performance and behaviour. The study found that calves subjected to fence line separation seven days before weaning displayed less distress behaviours, including vocalisation, than calves that were abruptly weaned. Furthermore, fence line weaning minimised losses in weight gain in the post-weaning period, with abruptly weaned calves failing to compensate for these early losses in weight gain up to ten weeks after the weaning period.

Anti-suckling devices

Researchers in Canada have recently developed an anti-suckling device known as the QuietWean® nose flap. The device is made out of lightweight plastic and prevents the offspring from suckling their dam, but still allows the calves to eat and have full social and physical contact with their mother. After calves have worn the suckling device for four to seven days, the nose flaps are removed and cows and calves are separated as normal.

A recent study carried out at Harper Adams University, and funded by AHDB Beef & Lamb, investigated the effects of QuietWean® nose flaps on weaning stress in suckled calves. The results showed that there were no significant differences in behaviour or growth rate between calves weaned using the anti-suckling device and those abruptly weaned.

Despite not being significant, the QuietWean® calves showed a reduced liveweight gain in the period when nose flaps were in place, compared to controls. This was expected due to the removal of milk from the diet. However, for the 11 days post-weaning, the QuietWean® calves had a greater liveweight gain, compared to the abruptly weaned calves. Despite not being significant, this suggests a reduced growth check at weaning compared to the abrupt weaning method.



Figures 1 and 2 show the effect of treatment on daily liveweight gain for both bulls and heifers.

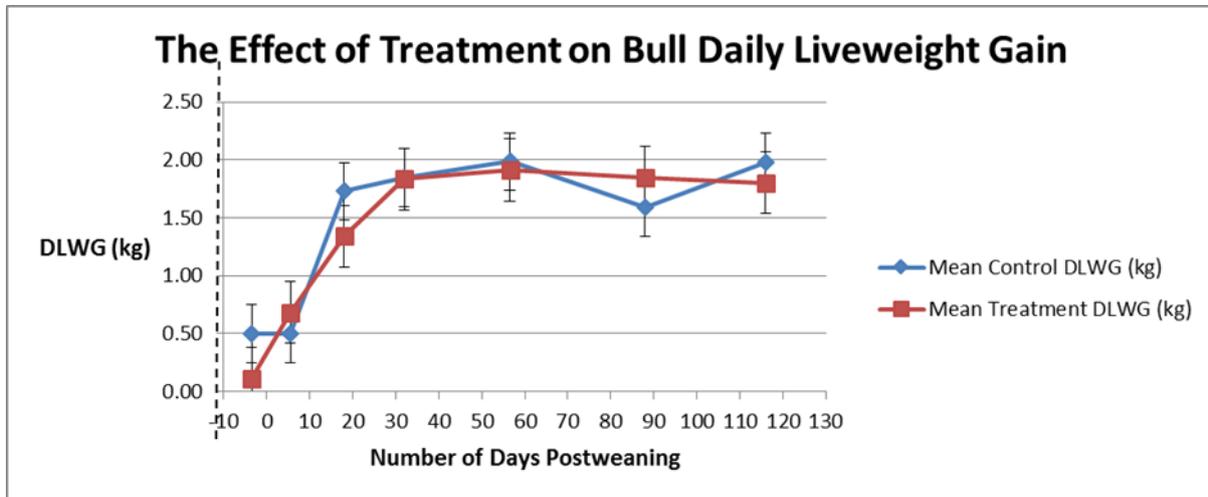


Figure 1: Effect of treatment of bull daily liveweight gain

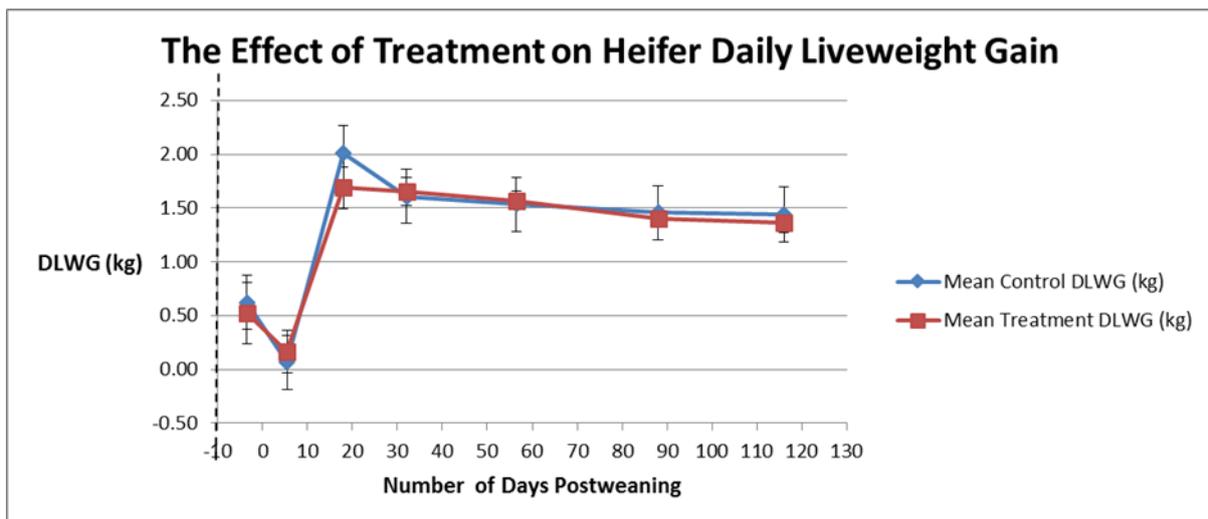


Figure 2: Effect of treatment on heifer daily liveweight gain

Conclusions from the study were:

1. QuietWean® nose flaps are easily inserted but retention was poor in housed suckled calves. In this study, 50% of nose flaps in autumn-born calves fell out and 30% of the spring-born calves lost theirs
2. Calves appeared to be able to suckle with nose flaps in
3. Growth rate of calves was unaffected by weaning method, but results indicated that flaps restricted growth in the first week (by restricting suckling), but once flaps were removed growth rate improved, as opposed to the calves without flaps that saw a growth check at weaning and then subsequently recovered
4. Behaviour was not significantly different between calves with or without nose flaps. However QuietWean® calves appeared to vocalise less immediately after weaning (days +1, +2 and +3) than control calves. Behaviour was significantly altered by the day of observation pre-and post-weaning.