

Winter 2024 wintering system comparison

Research Question:

Does wintering on paddock on baleage, compared to fodder beet, improve wintering conditions for dairy cows and how does area allocation per day or frequency of baleage allocation impact soil conditions, cow behaviour and subsequent pasture regrowth.

Comparison 1: Effect of bale density

Cows in the LI Baleage farmlet have been wintered in 3 paddocks set up with different daily area allocations but targeting the same pre-graze pasture mass of approximately 2800 kg DM/ha.

The difference in daily area allocation was achieved by varying the density of bales in each paddock from 14T to 18 T DM/ha.

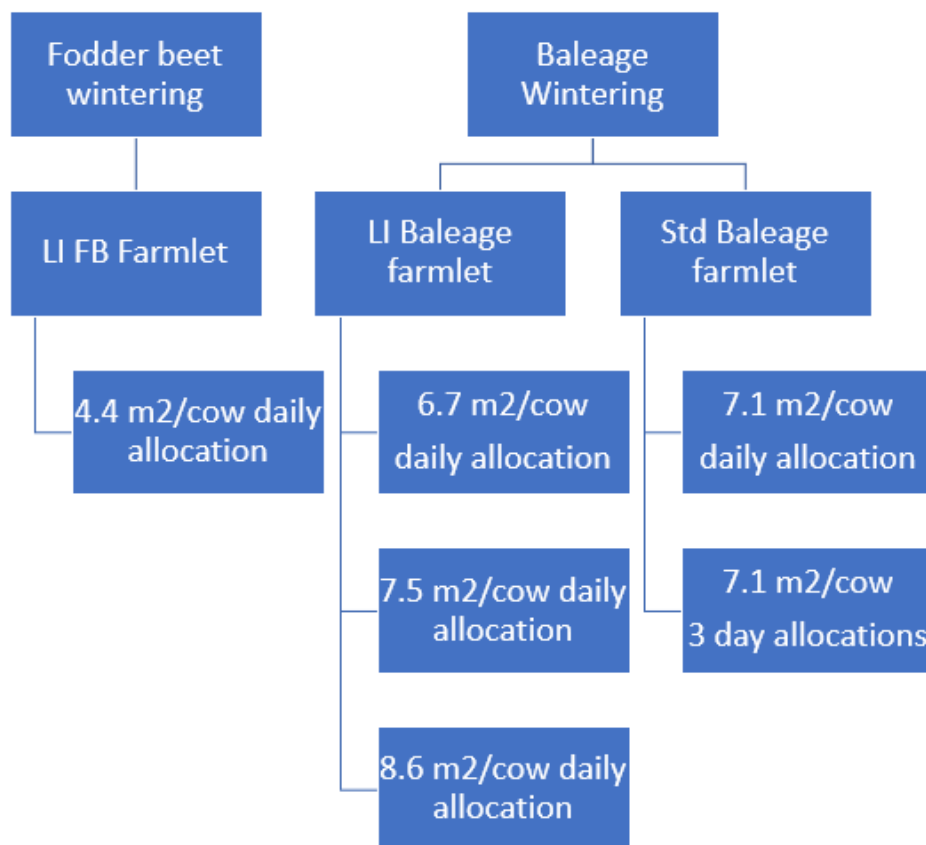
Resulting daily area allocations were 6.7, 7.5 and 8.6 m²/cow/day and targeted 12 kg DM/cow daily baleage allocations.

Comparison 2: Effect of frequency of baleage allocation

Cows in the Std Baleage farmlet were wintered in 2 paddocks set up with the same daily area allocation per cow (7.1 m²/cow and approx. 17 T DM/ha baleage density) but with one herd receiving their 12 kg DM/cow/day baleage allocation daily and the second receiving 3 days allocation every 4th day.

Fodder beet control

A similarly structured herd of cows were wintered on fodder beet (9.5 kg DM/cow/day) plus 3.5 kg DM/cow/day baleage with an approximate daily area allocation of 4.4 to 4.8 m²/cow/day.



All mobs were balanced for age, calving date, pre-winter BCS, BCS gain required and genetic merit as best as possible and all contained R2's. Within each winter treatment group 30 mixed age cows were selected for behaviour monitoring based on age, calving date and genetic merit. These cows were fitted with ICE Cube behaviour devices on their lower leg for the duration of the study.

Cows in the baleage treatments had access to 3 days' worth of area allocation between the front and back fences while the fodder beet treatment had 20 m²/cow/day total area allocation. Back fences were moved daily and water was available from a portable trough by the feed face.

Measurements

- Fortnightly crop yield
- Weekly pre-grazing pasture mass (baleage paddocks only)
- Weekly crop, pasture and baleage sampling for nutritive value
- Daily behaviour – lying, standing, walking, rumination
- Daily soil conditions – pugging depth, surface pooling, gumboot score, % bare ground
- Daily rainfall and soil temperature

30-day experimental period from 12 June to 11 July.