

Dairy Beef Herbage Allowance Trial

Johnstown Castle 2015-2019

Objective:

To evaluate the performance of dairy beef crossbred animals allocated three herbage allowances (3.3, 3.65 and 4.0 animals/ha for 2015, 2.8, 3.2 and 3.4 LU/ha for 2016).

To establish the optimum herbage allowance that aims to increase the carcass output while also investigating the environmental impacts of reducing the herbage allocation.

Sub-objectives:

- a) Carry out an economic appraisal of the production systems across various herbage allowances
- b) Consider the influence of herbage allowance on meat eating quality
- c) Investigate the environmental impact of reduced herbage allowance on beef farms
- d) Determine the influence of strain of sire

Tasks:

- Compare performance of animals on different stocking densities.
- Evaluate economic performance.
- Evaluate genetic performance.
- Determine the effect of dairy beef systems on colour, chemical composition and sensory characteristic of beef muscle.
- Optimise soil fertility and evaluate environmental sustainability of increased herbage allowance for dairy beef production systems.

Trial Design:

- Full farm systems study consisting of three herbage allowances.
- 216 animals used each year; 72 animals per treatment.
- Three sire breeds; Angus, Hereford and Limousin
 - Min. reliability of 50% for calving difficulty
 - PTA for calving difficulty of 4% or less
 - Short gestation
- 2015- Heifers slaughtered off pasture at 19 and 21 months. Half steers slaughtered at 21 months, remaining slaughtered at 27 months.
- 2016- Animals will be slaughtered to a fatness level (fat score of 3= minimum), determined by Body Condition Scoring every three weeks from 19 months of age onwards.

Grassland Management:

- Animals will be rotationally grazed on a paddock system.
- To avoid confounding of live weight gains, each grazing group will be allocated herbage of similar pre-grazing height and mass.

- Post-grazing sward surface heights will reflect the differences in herbage allowance; animals with the lower herbage allowance will graze to a lower post-grazing residual.
- Surplus herbage will be removed as baled silage.
- Grassland measurements (herbage mass determination, chemical analysis, pre and post-grazing heights and herbage utilisation) and grass budgeting will be carried out to aid management decisions.

