

Finishing strategies for dairy bulls slaughtered at 15 months of age



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Introduction

- Traditionally **steer** production systems dominated
 - ➔ Increased interest in **bull** production systems (Bord Bia, 2015)
 - ➔ Greater feed efficiency and carcass output (Steen, 1995)
- Current UK **market specifications** for dairy bulls (Dawn Meats, 2011)
 - ➔ <16 months of age
 - ➔ 270 kg carcass weight or greater
 - ➔ Carcass grade of O= 2+ or greater
- Previous research has shown
 - ➔ **Grass silage and concentrate diet** resulted in reduced performance
 - ➔ **Concentrate *ad libitum* diet** has the potential to meet specifications (Murphy et al., submitted)



Objective:

What are the effects of finishing regime on the performance of Holstein-Friesian bulls slaughtered at 15 month of age?



Materials and methods

60 spring born Holstein-Friesian bull calves

Mean DOB: February 6



Aug 12

Phase 1
at pasture

Nov 3

Phase 2
indoors

May/June

T1

Pasture only

Ad libitum barley finish

T2

Pasture + 3 kg DM barley

Ad libitum barley finish

T3

Pasture + 3 kg DM barley

Ad libitum maize finish

T4

Pasture + 3 kg DM maize

Ad libitum barley + megalac finish

Diet Composition

- ➔ **Barley based concentrate** = 800 g/kg barley; 140 g/kg soya bean meal; 40 g/kg molasses; 20 g/kg minerals
- ➔ **Maize based concentrate** = 400 g/kg maize meal; 400 g/kg barley; 140 g/kg soya bean meal; 40 g/kg molasses; 20 g/kg minerals
- ➔ **Barley + megalac concentrate** = 750 g/kg barley; 140 g/kg soya bean meal; 50 g/kg megalac; 40 g/kg molasses; 20 g/kg minerals

Materials and Methods

- **Rotationally grazed** in a paddock system during phase 1
- **Pre-grazing** sward height: 9.3 cm
- **Post-grazing** sward height: 5.6 cm
- Adapted to 3 kg DM of concentrates per head daily over a **10 day period**
- Concentrates offered in **1 feed**



Materials and Methods

- **All bulls** housed on November 3
- Housed on slatted floor **accommodation**
 - 3 replicates per treatment
- Adapted to concentrates *ad libitum* over a 21 day period
 - **Fresh concentrates** offered daily
 - Weigh backs completed **twice weekly**
- Cattle weight **fortnightly**
- Statistical analysis
 - **Fixed effect: Finishing regime**



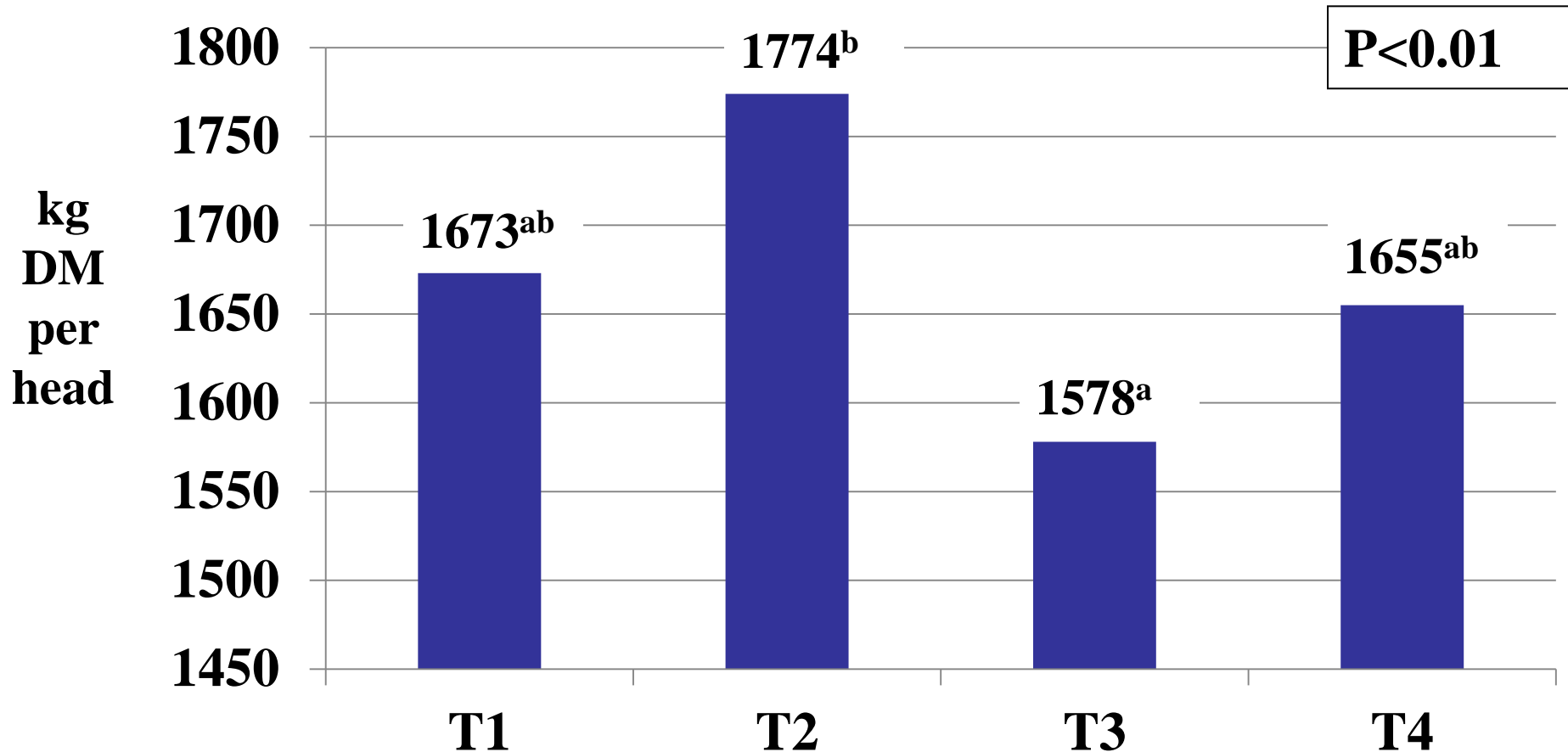
Results



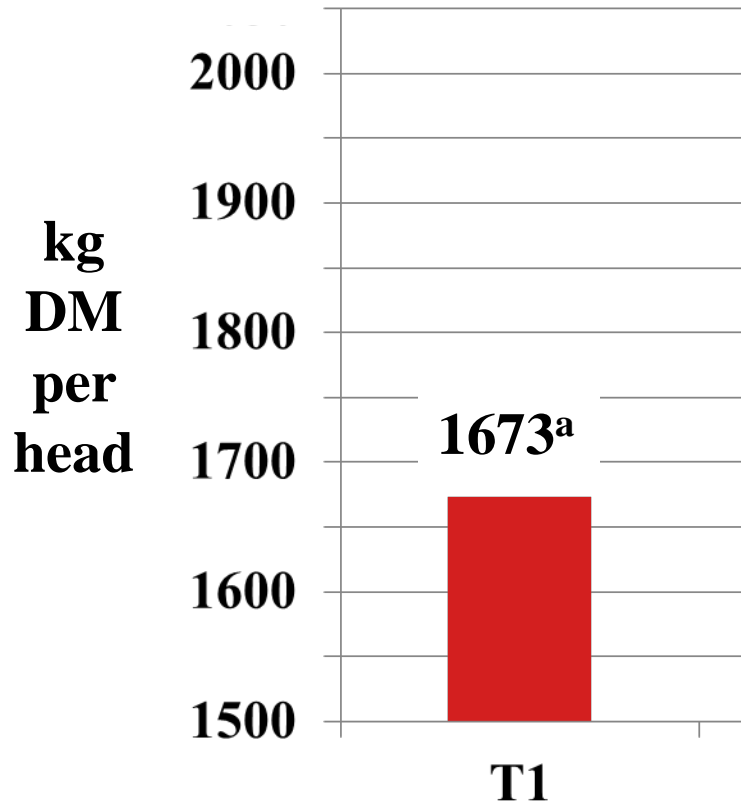
Animal performance

	T1	T2	T3	T4	SEM	P-value
Start weight (kg)	175	181	173	181	6.1	0.7628
Housing weight (kg)	247	256	263	271	7.9	0.2065
Slaughter weight (kg)	546	572	554	552	15.0	0.5952

Concentrate DMI during finishing



Total concentrate DMI



Carcass performance

	T1	T2	T3	T4	SEM	P-value
Carcass weight (kg)	283	296	288	281	8.4	0.5680
Kill out proportion (g/kg)	518	517	521	509	3.5	0.1191

Conclusion

- All strategies met the **carcass weight** and **conformation score** specifications
- Only T2 and T3 also met **fat score** requirements
- **Supplementing calves** at pasture is required to achieve market specifications
- ➔ Combining supplementation at pasture with *ad libitum* **barley or maize based** finishing diets achieved market specifications





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Thank you for your attention

Questions?

