

Beef Systems Research

Strategies for finishing suckler-bred male cattle under 19 months of age at pasture, or indoors on rations differing in composition

Beef production in Ireland is mainly based on producing males as steers at ca. 24 months of age, or greater, on grass-based systems. Finishing spring-born steers at two years of age involves an expensive final winter feeding period. As grazed grass is considerably cheaper than grass silage or concentrates, early finishing of cattle off pasture before housing becomes necessary, is less costly.

Recently, a sizeable proportion of the male cattle slaughtered in Ireland have comprised young bulls. Traditionally, producing bull beef has involved “intensive” indoor systems usually based on high levels of concentrate feeding. Incorporating a grazing period into suckler bull beef systems involving spring-born, late-maturing breed types, can reduce production costs but these animals generally require an intensive finishing period indoors pre-slaughter in order to achieve adequate carcass fat cover at a young age. There may be greater scope for finishing late-maturing breed autumn-born bulls at the same age, but off high nutritive value ‘spring grass’, as they are more mature and thus, should have a greater propensity for fat deposition in comparison with more immature spring-born bulls. Likewise, early-maturing breed bulls may reach acceptable carcass fat scores more quickly or on lower input diets than late-maturing breeds, but this needs to be quantified. As an indoor finishing period on high concentrate diets is the most expensive component of bull beef systems, information on optimizing feed nutrient efficiency during this phase and achieving target fat cover as quickly as possible is required. Feed ration composition may have role in enhancing the rate of fat deposition and thus, achieving earlier ‘finish’.

Supplementation at pasture may be one strategy to overcome nutrient deficits for high-growth-potential grazing cattle. Previous research on concentrate supplementation primarily concerned lower growth potential steers grazing autumn pasture, which is not directly applicable to bulls of high growth potential or to cattle grazing pasture earlier in the year. Consequently, more information is required on the role of concentrate supplementation as a means of finishing cattle off pasture.

Males produced as bulls are inherently more efficient for beef production than steers of similar breed, age, reared and slaughtered in the same way but most published data derives from confined systems, often with high inputs of concentrates. The relative performance of bulls and steers of modern beef genotypes on grass-based systems is unclear, and requires elucidation.

A series of production studies are ongoing at Teagasc, Grange in order to evaluate the effect of breed type, age at slaughter, gender, supplementation at pasture and finishing diet type on intake, performance, feed efficiency, and carcass (especially fat cover) and meat quality traits of suckler-bred male cattle.

Funded by the Irish Department of Agriculture, Food and the Marine.