

Teagasc Notes for the week ending Friday October 20th 2017

Beef

Finishing Angus and Hereford dairy crossbreds

Research at Johnstown Castle examined various finishing strategies for early and late spring-born Angus and Hereford dairy crossbred heifers and steers (**Table 1**). Animals were either finished at pasture or indoors during their second winter.

Results from Johnstown Castle have shown that spring-born early-maturing dairy crossbred heifers (February to April born) should be slaughtered before the second winter housing from 19 to 21 months of age (September to November). Finishing heifers indoors during their second winter resulted in a greater carcass weight, but winter finishing costs were inevitably incurred and some heifers were over fat at slaughter. An economical appraisal of that system highlighted that finishing heifers indoors was less profitable than finishing heifers at pasture. The blueprint for the early-maturing heifer system is outlined later.

Early spring-born (January and February), early-maturing steers have the potential to be slaughtered at the end of the second grazing season. Previously, the blueprint for these steers involved a winter finishing period of 80 days. While both systems were profitable, finishing steers during the second winter was less profitable than pasture finishing. Alternative finishing strategies were also investigated for late-born steers. Animals were either finished indoors during the second winter or finished during their third season at pasture at 28 months of age. Results showed that steers that were finished indoors had a lighter carcass weight and that the system was less profitable than finishing animals during their third season at pasture.

The optimum production systems for early-maturing heifers and early- and late-born, early-maturing steers are outlined below. In all of the systems animals were allocated 2.5kg of concentrates per head daily for 60 days pre slaughter.

Early-maturing heifer production system

After their first winter, heifers were turned out to pasture in early March and slaughtered off pasture at the end of the second grazing season between September and November (19 to 21 months of age). Target carcass weight for this system is 235- 250kg. Carcass conformation for heifer production systems were predominately O=/O+, with carcass fat classes of 3-/=. Results from Johnstown Castle have shown that all spring-born heifers should be slaughtered before the second winter.

February-born steer

Steers were at pasture for the first grazing season and 'stored' during the first winter on grass silage ad libitum, supplemented with 1.5-2.0kg of concentrate daily depending on silage quality. They were turned out to pasture for the second grazing season and slaughtered off pasture in November. Average daily gain during the second season at pasture is 0.8kg. The target carcass weight in this system is 280kg. Average carcass conformation score was O= and carcass fat score was 3-.

April-born steer

Animals were at pasture for the second grazing season and were then housed and offered grass silage only on an ad libitum basis for the second winter. During this housing period average daily gain (ADG) is typically 0.50kg. Steers are then turned out to pasture in March and slaughtered in June. ADG during the third season at pasture is 1.3kg.

The target carcass weight is 320kg, with conformation and fat scores of O+ and 3+, respectively. This system is particularly well suited to calves born in late spring (April/May), as winter finishing is avoided and a heavier carcass weight is achieved under grazing conditions.

Table 1: Three years of animal performance results of early-maturing dairy crossbred heifers and steers.

Month of birth	February born		April born		February born		April born	
	19	21	19	21	21	23	21	26
Slaughter age (mo)								
Finish	Pasture	Pasture	Pasture	Indoor	Pasture	Indoor	Indoor	Pasture
Live wt. at slaughter (kg)	450	476	446	518	525	607	547	621
Carcass wt. (kg)	234	247	234	257	274	308	269	322
Conformation score	O=	O+	O+	O+	O=	O+	O+	O+
Fat Score	3-	3=	3-	4-	3+	3+	3+	3+
Kill out %	52.0	51.8	52.5	49.6	52.1	50.7	49.1	51.9

Soil Fertility

Time to take soil samples

Teagasc soils database shows that only one in 10 grassland soil samples analysed have the optimum balance of the major soil nutrients to maximise grass production. Soil analysis is the most cost-effective tool to optimise fertiliser and manure applications. An up-to-date soil test report will provide a sound footing to tailor fertiliser requirements on a field-by-field basis and ensures maximum potential return from the spend on fertilisers.

Now is the best time to take soil samples and plan lime/fertiliser/manure programmes for 2018. For grassland soils, request an S1 test to check the soil's lime status, and phosphorus (P) and potassium (K) levels. Make sure that fields are sampled correctly and take note of the following:

- for sampling purposes divide the farm into fields or areas of between 2 and 4ha;
- take separate samples from areas that differ in soil type, previous cropping history, slope, drainage or persistent poor yields;
- avoid any unusual spots such as old fences, ditches, etc.; and,
- do not sample a field for P and K until three to six months after the last application of fertiliser P and K (now is a good time to soil sample). Where lime has been applied, allow a time lag of two years before sampling for lime requirements; and, follow a 'W' soil sampling pattern to ensure that the sample is representative of the entire field. Ensure that all soil cores are taken to the full 10cm depth.

Health and safety

Check your electrics

Check your lighting and electrical facilities now as darkness is setting in and the clocks have gone back. Now is the time to make some vital safety checks. Firstly, the electrical safety switch or 32mA residual current device (RCD) is a highly effective safety device for portable appliances. However, an Irish study indicates that over 15% do not trip when tested, which could lead to electrocution.

Consult the ESB Networks' booklet –'Farm Safely with Electricity' – which is available at www.esbnetworks.ie/staying-safe/farm-safety. Most importantly, check that fire/smoke alarms in the home are in working order