

BEEF

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Early-maturing animal finishing options

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Slaughtering cattle off grass at the end of the second grazing season is an efficient system that can be implemented on farm with early-maturing calf-to-beef heifers, and similarly with their steer comrades who are advanced enough at this stage of the year. Early finishing will:

- allow more younger stock to be carried;
- free up shed space; and,
- negate the need for a more expensive winter finishing period.



For this system to work, be it with heifers or steers, a high level of animal performance is needed throughout the animal's lifetime and a good weight for age is needed at the start of finishing. A short meal feeding period at grass of six to eight weeks starting in the period mid August to mid September is optimal before slaughter in October.

Table 1: Guideline weights for calf-to-beef off grass finishing.

	Early-maturing steer		Early-maturing heifer	
	Date	Weight	Date	Weight
Finishing start	September 1	490kg	September 1	465kg
Slaughter weight	November 1	550kg	October 15	525kg
Carcass weight	-	280kg	-	255kg

Early-maturing heifers

Early-maturing heifers should be 465kg at the start of the finishing period (**Table 1**) and beginning to lay down reserves of fat. With a meal feeding rate of 3kg/head/day they are expected to achieve an average daily gain of 0.9-

1kg over the finishing period, weighing 520kg at slaughter and leaving a carcass weight of 255kg.

Early-maturing steers

It is unlikely that all of the early-maturing steers on farm will be advanced enough to slaughter off grass before the second winter. However, consistently being able to select a proportion of these animals for an early finish is very achievable with good management. Steers weighing at least 490kg before September 1 may be suitable. An average daily gain of 1.1kg is expected over the finishing period on 4kg of meal, leaving a liveweight at slaughter of 550kg and a carcass weight of 280kg.

Points to consider:

- base finishing decisions on recent cattle weighing;
- all cattle should be within 60kg of slaughter weight at meal feeding start;
- lighter cattle can begin finishing when housed later in autumn;
- some dairy-bred steers with stockier builds may also suit an early finish;
- split meal feeding into a morning and evening feed if more than 4kg is being fed;
- meal feeding is never a substitute for good grassland management, so continue to offer good-quality grass to finishing stock;
- the meal fed should be high in energy (0.95UFV/kg) – a protein content of 12-14% crude protein is adequate; and,
- draft cattle for slaughter regularly to maximise percentage with correct fat score.

Climate actions for August

August is a good month to sort out deficits in grazing infrastructure to optimise days at grass, if your capital expenditure budgets allow



Extra grazing days in the autumn are achieved by building grass cover during August



Build autumn grass by spreading 20-25 kg N/ha using protected urea in August, when you get the best response in grass growth



Consider collecting and returning faecal samples to a DAFM approved lab if you have selected this task in BEEP – S



If feeding ration at grass - feed maximum 12-14% crude protein



Empty your slurry tanks

RESEARCH UPDATE

Dairy calf-to-beef performance

NICKY BYRNE, DONALL FAHY and ANTHONY MULLIGAN of AGRIC, Teagasc, Grange, Dunsany, Co. Meath report on the evaluation of the Grange dairy calf-to-beef system.

Dairy-bred progeny account for 57% of the cattle processed in Irish meat plants, growing significantly in recent years due to dairy herd expansion. While the number of dairy-beef animals has grown, there has been a decrease in their carcass performance in terms of conformation and weight. From 2018 to 2020, Teagasc Grange compared the physical and financial performance of three dairy-beef genetic groups. They consisted of male Holstein Friesian (HF) and two Angus (AAX) groups, representing the main calf breeds coming from the dairy herd. The HF group were the progeny of the top-four Economic Breeding Index (EBI) sires on the active bull list. The two AAX groups were the progeny of AA sires that were ranked high (HIGH AAX) or low for carcass weight and conformation (LOW AAX). Male calves were purchased from 33 dairy farms throughout Ireland and arrived on farm at 21 days of age. The effect of calf nutrition on lifetime performance was also evaluated, with half of the three groups reared on either 4 litres (L) or 8L of milk replacer per head per day.



Angus calves outperformed Holstein Friesians.

There was no difference in lifetime growth or carcass performance of calves reared on the 4L or 8L milk treatments. Despite the 4L treatment consuming 25kg more concentrate, there was a saving of €33 per head over the calf-rearing phase. Each group achieved major reductions in their age at slaughter compared to the national dairy-beef herd. Angus groups had the same slaughter age and finishing period (63 days), which was one month shorter than HF steers. HIGH AAX steers had slightly higher carcass weights and conformation than LOW AAX steers, but both AAX groups had superior carcass performance to HF steers, resulting in a higher carcass value. The level of forage in the diet of each group was high, with both AAX groups achieving 87% of their lifetime feed requirement on a dry matter (DM) basis from grazed and conserved forage, compared to HF at 85%, meaning that AAX groups consumed a total of 549kg of concentrate compared to HF steers consuming 695kg. HIGH AAX steers achieved the highest net margin (**Table 2**), due to their improved carcass weight and conformation,

maximising the value of each carcass kg, and both AAX groups performed better than HF steers due to higher carcass performance and reduced finishing costs.

All groups achieved similar carcass weights, but AAX groups produced a carcass of higher value, through improved conformation at a younger age and from fewer inputs. These

biological benefits can be eroded where excessive premiums are paid for beef-sired calves. The use of beef genetics on the dairy herd will play an important role in improving the sustainability of both the dairy and beef sectors, but large scope exists to improve the carcass characteristics of beef sires used commercially on the dairy herd.

Table 2: The effect of sire carcass merit on slaughter and system performance of dairy-beef cattle.

	HF	HIGH AAX	LOW AAX
Carcass/slaughter performance			
Age at slaughter (days)	686 (22.8 months)	656 (21.8 months)	657 (21.8 months)
Carcass weight (kg)	300	305	300
Carcass conformation (1-15)	3.8 (O-)	5.3 (O=)	5.1 (O=)
Carcass fat (1-15)	8.4 (3=)	8.9 (3+)	9.2 (3+)
Carcass value ¹	€1,065	€1,156	€1,123
System performance			
Carcass output/ha (kg)	960	976	960
Net margin (€/ha) ²	502	720	602

1. Base price of €3.70/kg on the QPS grid; €0.20/kg QA payment and €0.10/kg breed bonus. 2. Net margin excludes land and labour charge and assumes a calf purchase price of €60 and €160 per head for HF- and AAX-sired bull calves.

HEALTH & SAFETY

Beware of moving machinery

August is harvest month and a lot of machinery is moving on farms and public roads, including trailers, balers and silage gear. Movement brings danger, particularly to bystanders, including children and older farmers. A vehicle travelling at walking speed (5km/hour) travels 1.4 metres per second. Being struck gives a bystander little chance due to the impact force.

In August, a lot of powered machines are used

so make sure moving parts are guarded. This applies particularly to machines used in a stationary position, like augers and slurry vacuum tanker drive shafts. Entanglement in a moving machine part leads to horrific injuries. Also be aware of the dangers of livestock, particularly bulls at the end of the breeding season and autumn-calving cows with calves at foot.

