

Teagasc Green Acres Calf to Beef Fact Sheet



Early maturing dairy beef systems

Angus and Hereford early maturing animals play an important role in dairy beef systems due to their ease of finishing. These animals represent ~35% of all births to dairy dams annually.

Elements to success

- Complete careful budgets before purchasing calves; dairy beef systems are sensitive to calf purchase price, concentrate price and selling price.
- Purchase only healthy calves from a trusted, known source – preferably directly off farm.
- Pay careful attention to calf genetics; avoid poorer-beef merit calves. Aim for positive carcass and conformation scores.
- Implement a stringent herd health plan to include vaccination, dosing and housing requirements.
- Excellent grassland management and quality silage (>72DMD) required.
- Monitor weight gain frequently and draft finishing cattle regularly.

Production systems for early-maturing heifers

Given the easy finishing abilities of early-maturing heifers and their limited carcass weight potential at older ages, 19-21 month slaughtering before the second winter is the preferred finishing option.

19-21 month heifers

- Finished off grass at 19-21 months in October/November of second grazing season.
- Carcass performance of 235kg and O=3- at 19 months or 250kg and O+3= at 21 months achieved in Teagasc Johnstown Castle trials.
- Lifetime daily gain of 0.8kg required.
- Typical concentrate input of 450kg/head.
- Grazed grass, silage and concentrates account for 73%, 9% and 18% respectively of the animal's overall diet.
- Yearling heifers turned out in spring must gain a minimum of 200kg over a 220 day grazing season.
- Concentrate offered at grass for final 60 days prior to slaughter.

Early-maturing steer systems

Approximately 250,000 Angus and Hereford male calves come available annually. Research conducted in Johnstown Castle has shown that steers finished off grass are more profitable than shed finished animals.

21-month steers

- Suited to early spring born bull calves (February born).
- Finished off grass before housing in the second winter.
- Carcass performance of 280kg at O=3- achieved in Teagasc Johnstown Castle trials.
- Lifetime daily gain of 0.8kg required.
- Steers are stored during the first winter on grass silage ad-lib supplemented with 1.5-2.0kg of concentrate daily, depending on silage quality.
- Concentrate offered at grass for the final 60 days prior to slaughter (3-4kg/head/day).
- Grazed grass, silage and concentrates account for 63%, 19% and 18% respectively of the animal's overall diet.

23-month steers

- Suited to early spring born bull calves.
- Finished indoors at 23 months in December-February.
- Carcass weight target of 300kg with a O+3= carcass.
- Lifetime daily gain of 0.8kg required.
- Typical concentrate input of 800kg/head.
- Grazed grass, silage and concentrates account for 52%, 26% and 22% respectively of the animal's overall diet.
- 100kg of gain targeted over the finishing period.
- 500kg of concentrate required with excellent-quality silage over finishing period.

26-month steers

- Suited to late (April) spring born bull calves.
- Finished off grass during the third grazing season in June.
- Carcass target weight 320kg at O+3+.
- Lifetime daily gain of 0.75kg required.
- Typical lifetime concentrate input of 450kg/head.
- 4kg/head/day of concentrate required for the final 40 days pre-slaughter.
- Grazed grass, silage and concentrates account for 61%, 29% and 10% respectively of the animal's overall diet.
- Must gain 120kg in the 3-4 month window post-turnout in the third grazing season.



Weight gain targets

For success with early maturing dairy beef systems, appropriate measures must be implemented at farm level to ensure animals reach the desired levels of performance. Table 1 outlines the targeted weight gains for steers and heifers at various stages of production under various systems.

Table 1: Average daily gains and live weight targets for early maturing heifers and steers

System	19-month heifer		21-month heifer		21-month steer		23-month steer		26-month steer	
Calf DOB	April 1		February 1		February 1		February 1		April 1	
Stage	ADG	Kg	ADG	Kg	ADG	Kg	ADG	Kg	ADG	Kg
Weaned calf	0.70	90	0.70	90	0.70	90	0.70	90	0.70	90
1st season at pasture	0.70	190	0.70	230	0.85	240	0.85	240	0.75	210
1st winter	0.50	250	0.50	290	0.60	310	0.60	310	0.60	280
2nd season at pasture	0.90	480	0.90	510	0.90	525	0.85	510	0.75	450
2nd winter	-	-	-	-	-	-	0.95	610	0.50	490
3rd season at pasture	-	-	-	-	-	-	-	-	1.15	610

Cost of production

Table 2 provides guideline variable costs for each system from acquiring a calf at three weeks of age to slaughter. These figures, when combined with the farm's fixed costs, achievable beef price and calf purchase price, can be used to complete system budgets.

Table 2: Economic performance of early maturing heifer and steer finishing systems

System	19-month heifer	21-month heifer	21-month steer	23-month steer	26-month steer
DOB	April 1	February 1	February 1	February 1	April 1
Variable costs					
Calf rearing	€123	€123	€123	€123	€123
1st season at pasture	€68	€98	€102	€102	€70
1st winter	€92	€102	€106	€106	€98
2nd season at pasture	€209	€221	€226	€149	€134
2nd winter	-	-	-	€216	€122
3rd season at pasture	-	-	-	-	€157
Total variable costs / head	€492	€544	€557	€696	€705

More information on the Teagasc Green Acres Programme can be found at Teagasc.ie and on AgriLand.ie.

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