



Market and policy issues

Ireland remains one of the largest net exporters of beef in the world. The EU will continue to be the dominant market for Irish beef exports. The nature of the future trade relationship between the EU and the UK will determine the degree to which Ireland's current dominance of UK beef imports continues. If the EU-UK trade relationship diverges significantly from the Single Market model, Irish exports to the UK market will decline. Exports of beef to non-EU markets will grow rapidly from a low base.

The EU after the departure of the UK will remain a net importer of beef. Ongoing EU negotiation of preferential trade agreements with third countries will, over time, see some increase in the access to the EU market made available.

Further reform of the Common Agricultural Policy (CAP) will likely be reflected in increased emphasis on reducing the negative impact of agricultural production on the natural environment and support for production systems that enable the provision of ecosystem services.

Decoupled direct payments will over time converge closer to the average payment. These policy developments will pose challenges and opportunities for beef farmers depending on their beef production system.

Shape and size of the sector in 2027

Under the continuation of currently agreed policy, the number of suckler beef cows is likely to continue to decline between now and 2027. There is likely to also be a small reduction in the number of farms with beef cattle. The strength of the wider economy will be important in determining the vulnerability of farm households with beef enterprises.

There will likely be an increase in the number of farms rearing and finishing calves from the dairy herd, with some farms switching from suckling to these systems. The negative impact of the expected contraction in the suckler herd on finished cattle supply will be offset by the increased supply of calves from the dairy cow herd that is expected to materialise, as ongoing growth in dairy cow inventories continues.

Further successful development of dairy calf-to-beef enterprises will be contingent on better integration of

dairy farm and beef farm decision making with regard to genomic selection for beef traits. The continuation of live calf exports to continental European markets will be important in managing the supply of calves on the Irish market.

Technical performance indicators

Table 1 sets out the current physical and financial performance being achieved on suckling farms and presents performance targets based on what has been achieved on research herds in Teagasc Grange. It should be noted that Teagasc is currently investigating the potential of grass/clover pastures to substantially reduce fertiliser nitrogen (N) requirements for these systems.

Table 2 sets out the physical and financial performance targets that can be achieved for early-maturing dairy calf-to-beef steer and heifer systems, based on what has been achieved on research herds in Teagasc Grange. As with the suckler beef systems, research into grass/clover pastures is likely to substantially reduce fertiliser N requirements for these systems.

Environmental considerations

Reducing net greenhouse gas emissions on Irish beef farms will be one of the key priorities over the coming years. This will be achieved through a number of actions:

- improving the breeding efficiency of the national suckler herd;
- reducing the average age at slaughter of steers and heifers;
- increasing the use of protected urea instead of CAN-based fertilisers;
- a higher percentage of slurry targeted to be spread in the spring, while also using low-emission slurry spreading (LESS) methods, so as to improve nutrient efficiency and reduce environmental losses;
- reduce nutrient losses to water through improved nutrient management and improved management of land and farmyards;
- increasing focus on hedgerow maintenance;
- increasing the clover content in swards; and,
- exploring the potential role of forestry on more marginal land on beef farms.

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Table 1: Technical and financial performance for suckler calf-to-beef production.

Suckler calf-to-beef	Industry		Research performance ³	
	Current ¹	2027 ²	Low stocking rate	High stocking rate
Stocking rate (LU/ha)	1.6	1.8	1.6	2.6
Calving interval (days)	394	390	365	365
Six-week calving rate (%)	53	60	80	80
Calving at 23-26 months (%)	22%	29%	100	100
Calves/cow/year	0.85	0.87	0.95	0.95
Herbage utilised (t DM per ha)	6.2	7.2	6.4	10.6
Concentrates per LU (kg as fed)	299	334	360	360
Forage in the diet (%)	93	92	92	92
Steer carcass weight (kg)	395	385	394	394
Steer age at slaughter (months)	28	27	22	22
Steer grading	R+3=	R+3=	R+3+	R+3+
Heifer carcass weight (kg)	333	325	328	328
Heifer age at slaughter (months)	25	24	20	20
Heifer grading	R=3=	R=3=	R=3=	R=3=
Organic N (kg/ha)	116	136	122	202
Fertiliser N (kg/ha)	83	80	77	215 (150 ⁴)
Percentage N as protected urea	1%	50%	100%	100%
GHG (kg CO ₂ e/kg carcass)	23.5	22.2	18.6	20.0
Percentage slurry applied by LESS	5%	75%	100	100
Carcass weight output (kg/ha)	241	290	321	531
Production costs (€/kg carcass)	4.11	3.64	3.09	3.11
Gross output (€/ha)	1,028	1,216	1,266	2,094
Gross margin (€/ha)	494	615	766	1,045
Net margin (€/ha)	38	159	274	440
Net margin sensitivity ⁵			32	53

1. Teagasc National Farm Survey (NFS) average 2016-2018 based on single suckling herds with greater than 20 cows, Animal Identification and Movement (AIM) slaughter data, and Irish Cattle Breeding Federation (ICBF) national data. 2. 2027 values based on current trends and potential changes due to policy. 3. Research performance target is based on suckler to steer and heifer beef systems using the following prices: beef carcass base €3.75/kg; concentrates €265/t; protected urea €400/t; and, CAN €300/t. 4. Research is ongoing into grass/clover swards receiving 150kg N/ha. 5. Impact of 10c/kg change in beef price on net margin per hectare.

Research and advisory actions

- The beef research programme will develop and evaluate innovations in grazing management and grass-based feeding systems, including indoor feeding strategies, with the objective of optimising animal performance and the efficiency of feed provision.
- Herd health protocols will be developed to reduce the use of antimicrobials and anthelmintics on beef farms; best practices on beef farms will be promoted.
- The role of new genomic technologies to reduce bovine respiratory diseases will be evaluated; improved diagnostics and more targeted interventions will be developed.
- Factors underpinning animal fertility will be investigated with the objective of optimising whole herd reproductive

- performance; protocols for increasing the use of artificial insemination (AI) will be developed.
- Research will seek to improve the broader environmental sustainability of beef systems, including greenhouse gas and ammonia emissions, water quality, biodiversity and nutrient use efficiency.
- Reducing greenhouse gas emissions from beef cattle production will be a key goal. In particular, the impact of complex interactions between animal genetics, feeding systems and the rumen microbiome on enteric methane emissions will be evaluated.
- The effect of management, feeding systems and genetics on meat quality characteristics, including human nutritional attributes, will be evaluated.
- The productivity factors (intermediate inputs, capital and

BEEF (CONTINUED)

Table 2: Research performance targets for early maturing dairy calf-to-beef systems¹.

Dairy calf-to-beef	22-month steer		19-month heifer	
	Low stocking rate	High stocking rate	Low stocking rate	High stocking rate
Stocking rate (LU/ha)	1.7	2.8	2.1	3.0
Organic N (kg/ha)	146	240	167	248
Herbage utilised (t DM/LU)	3.7	3.7	3.1	3.1
Herbage utilised (t DM/ha)	6.3	10.4	6.3	9.5
Concentrates per LU (kg as fed)	930	930	795	795
Calves to finish (head/ha)	2.0	3.2	2.8	4.1
Forage in the diet (%)	77	77	79	79
Carcass weight (kg)	300	300	240	240
Carcass grading	O=3+	O=3+	O-3+	O-3+
Fertiliser N (kg/ha)	86	193 (150 ²)	86	193 (150 ²)
Liveweight output (kg/ha)	1,147	1,893	1,309	1,944
Carcass weight output (kg/ha)	588	971	668	992
Production costs (€/kg carcass)	2.86	2.73	2.84	2.72
Production costs (incl. calf ³ ; €/kg carcass)	3.39	3.26	3.38	3.26
Gross output (€/ha) ⁴	1,906	3,147	2,129	3,161
Gross margin (€/ha)	707	1,168	825	1,225
Net margin (€/ha)	223	501	231	490
Net margin sensitivity ⁵	59	97	67	99

1. Research performance target is based on early maturing dairy calf-to-beef steer and heifer systems using the following prices: beef carcass base of €3.75/kg; concentrates €260/t; protected urea €400/t; and, CAN €300/t. Number of animal units per livestock unit, EM steer 1.17, EM heifer 1.35. 2. Research is ongoing into grass/clover swards receiving 150kg N/ha. 3. Calf price assumed €160/head for bull calf, €130/head for heifer calf. 4. Gross output, carcass value minus calf purchase cost. 5. Impact of 10c/kg change in beef price on net margin per hectare.

labour) that influence the performance of beef farms on varying land types will be examined from the perspective of full- and part-time farming systems, with a focus on novel digital, mechanical and farm systems technologies.

- Develop a targeted dairy calf-to-beef support programme, disseminating the key messages from the Teagasc Green Acres programme and Teagasc research on dairy calf-to-beef systems through the wider beef knowledge transfer (KT) programme.
- Establish a dairy calf-to-beef demonstration farm using optimum beef genetics and grazing management.
- Evaluate different 'beef contract rearing' protocols to develop stronger collaboration between dairy and beef farmers.
- Support and grow the beef discussion group network to enlarge the uptake of sustainable profitable technologies.
- Continue to focus on grazing management to increase utilisation, improve nitrogen (N) use efficiency, and increase uptake of grass/white clover pastures using PastureBase Ireland.

- Implement appropriately designed ecological measures to increase biodiversity.
- Have a pasture-based organic beef farm within a KT demonstration farm programme.
- Continue to collaborate with key industry stakeholders, e.g., meat processors, the Irish Cattle Breeding Federation (ICBF), Animal Health Ireland (AHI), and Bord Bia to promote best practices and support innovation in the Irish beef industry.
- Provide more timely and targeted advice to all beef farmers through increased use of digital media.
- Provide continuous professional development courses on a range of relevant topics to beef farmers and other personnel working in the beef industry.

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The road map for beef is available on www.teagasc.ie