



Market and policy issues

- In 2018, the EU was 86% self-sufficient in sheep meat. This is expected to decline marginally due to growth in consumption being greater than growth in meat production.
- Margins from hill lamb production are insufficient to maintain current levels of farming activity. Hill sheep farming is essential for the maintenance of hill and mountain landscapes.

Shape and size of the sector in 2027

- When the UK leaves the EU, Ireland will be the fifth largest sheep producer, and the largest net exporter in the EU, with 82% of production exported.
- The national flock in 2019 was 2.57 million ewes, having contracted slightly (by 3.2%) from the previous ten-year high in 2017.
- It is expected that Irish sheep numbers will remain stable over the medium term. In 2019, 21% of flock owners had flocks of over 150 ewes.

Environmental and land use implications

- Irish sheep production systems play a vital role in producing high-quality protein foods for an increasing global population, from a land resource which is generally unsuited to any alternative agricultural food-producing enterprise.
- The maintenance of current hill and mountain landscapes is viewed as important from an environmental and sustainability perspective, as well as rural community and tourism perspectives.
- Hill and mountain sheep farming systems operating at appropriate stocking rates and grazing the hill for up to 10 months of the year contribute significantly to maintaining high-quality habitats and rich species biodiversity.
- The provision of support to hill sheep farmers on the basis of their contribution to the maintenance of hill and mountain landscapes will be essential to the maintenance of current levels of hill sheep farming activity.
- There is scope to increase the number of organic sheep farmers, subject to the identification of sustainable routes to market for store lambs.
- The targets outlined in Table 1 will lead to a reduction in

greenhouse gas (GHG) emissions from sheep production, when expressed on the basis of per kg of sheep meat produced.

- Compliance with the Nitrates Directive is not a major issue on sheep farms.
- The objectives of the Water Framework Directive in terms of water quality are being achieved on sheep farms.
- Teagasc BETTER/Signpost farms play an important role in rolling out technologies in relation to genetic improvement, use of low-emission technologies, antimicrobial resistance, climate change, clover establishment and good water quality. These objectives are compatible on sheep farms.

Technical performance indicators

- The lowland sector can achieve significant improvements in terms of ewe productivity and lamb carcass output/ha.
- Lambs reared per ewe can increase from the current level of 1.39 to 1.55 by 2027, through the use of available genetics and management practices.
- On lowland sheep farms, a stocking rate of 9 ewes/ha can be achieved by 2027, by growing 9 tonnes DM/ha through improving soil fertility, incorporating white clover into grass swards, and replacing calcium ammonium nitrate (CAN)-based fertilisers with protected urea. No increase in chemical nitrogen (N) will be required.
- Increasing stocking rate to 9 ewes/ha will increase average output per hectare from the current level of 223kg of lamb carcass to 280kg; this will generate a gross margin of approximately €825/ha at current prices and input costs.
- Better nutrition planning, in conjunction with improved flock health planning, biosecurity, self-contained flocks and improved on-farm hygiene, will reduce the reliance on antimicrobials and anthelmintics, which will feed into the One Health Strategy.

Research and technology transfer actions

- The continuation and strategic expansion of an effective model for technology uptake through the BETTER Farm programme/Signpost Farm Programme.
- Teagasc has a proactive Sheep Stakeholders Committee, which ensures an effective partnership between Teagasc, industry stakeholders and sheep farmers that identifies relevant research and technology adoption needs.

SHEEP (CONTINUED)

- Future research will be targeted at improving animal production efficiency, grassland management and environmental science, flock health, forage crop evaluation, rumen microbiome and GHG production with a strong likelihood of adoption by the sheep industry.
- Research/demonstration farms will continue to demonstrate the financial and technical gains in efficiency that can be achieved through better use of animal breeding, grassland management, flock health and other farm management practices.
- Grass-clover varieties and companion forages are being evaluated to improve animal production and sustainability. Alternative forages are being evaluated for finishing of store lambs.
- Teagasc maintains strong collaborative links with research organisations globally. The imported New Zealand genotypes are being evaluated against the best available Irish and UK strains for growth rate, carcass, health, carbon footprint, and maternal traits under grass-based systems.
- Research programmes will continue, in conjunction with external partners, to develop and evaluate low-cost genomic technologies.
- Portable accumulation chambers are being used to identify the most feed-efficient sheep with the lowest GHG footprint, and linked to rumen microbiome, particularly the methanogen bacterial populations.
- Adding value to hill farming systems will be promoted through greater integration between hill and lowland sheep producers and the BETTER Farm programme.
- Different systems for finishing store hill and crossbred lambs will be evaluated in terms of profitability and meat quality attributes.

- A parasitology programme will continue to reduce the dependence on anthelmintics and ameliorate the development of anthelmintic resistance in both internal and external parasites.
- Teagasc commits to working closely with Sheep Ireland in the further improvement of genetic indices and in the promotion of genetically superior rams, including the launch of genomic selection.
- Teagasc proposes closer research collaboration with Irish universities to avoid duplication of resources and to maximise the benefit of research to the sheep industry.
- Teagasc will continue to gain a better understanding of the demographics of both the lowland and hill sheep sectors.
- Teagasc will hold annual lowland and hill national sheep conferences and use electronic and social media platforms to communicate new information to the industry.

Comment

The overall vision is for a lowland sheep sector that is competitive, grass based and produces food that meets consumer requirements. The vision for the hill sector is that it will be primarily supported for its role in maintaining the hill and mountain environment, in addition to producing store lambs (finishing in the period January to April) and quality prolific replacements for lowland flocks.

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

Table 1: Technical and financial performance for midseason flocks with at least 40 breeding ewes.

Sectoral average	Current*	Industry target 2027	Current research performance
Litter size	1.48	1.75	>2.1
Ewes lambled (%)	96	96	96
Lambs weaned per ewe joined	1.37	1.55	>1.85
Lamb mortality (%)	7.6	<8	<12
Stocking rate (ewes/ha)	7.8	9	12
Concentrate input (kg/ewe)	103	50	35
Chemical nitrogen (kg/ha)	73	85**	132
Carcass weight (kg/ha)	225	280	>445
Lambing date		Lambing to grass	
Direct cost (€/ha)	523	570	700
Gross margin (€/ha)	659	825	1,400
Fixed costs	510	500	550
Net margin (€/ha) (excl. support payments)	149	325	850
Average GHG emissions per kg liveweight sheep produced* (kg CO ₂ e/kg carcass)	9.2	8.5	8.3
Percentage chemical N spread as protected urea	1% (2019)	35%	35%

*Teagasc National Farm Survey (NFS) average 2017-2019 based on midseason flocks with at least 40 breeding ewes. Includes coupled support payments (e.g., Sheep Welfare Scheme payment). **Includes a 14kg/ha contribution from clover.