



Market and policy issues

Irish grain prices vary considerably from year to year in response to world markets, with swings as much as 35% of output price. Irish grain is at a competitive disadvantage against imported grain, which may be grown with novel technologies and inputs not available in Ireland. Irish tillage farms are competitive with our European neighbours due to our high yield (one of the highest in the world). High costs associated with our smaller farms combined with costs related to a wetter climate, e.g., higher disease control, higher machinery capacity, and harvesting wetter grains all have adverse effects on overall profitability and resilience.

Shape and size of the sector in 2027

Currently there are circa 5,000 full-time tillage farmers producing the majority of output, with 10,000 farms involved in tillage at some level. The activity of the industry is estimated to contribute over €1.3bn per annum to Irish economic output.* The number of "specialist" tillage farmers may decrease slightly; however, output is expected to remain the same. Domestic demand for grain and protein crops remains strong, with ample potential to increase production. There is significant scope to increase the inclusion of Irish grains in livestock diets and the drinks industry, to support Origin Green credentials, and grain at a premium over

international commodity markets. Rotational crops have the potential to increase supply to high-value food markets such as: cold pressed oil; salad and chipping potatoes; and, oats for the human market.

Targeted improvements for the tillage sector

- Increase grain yields by 1% per year.
- Increase the levels of production going to premium markets to 50%.
- Reduce reliance on plant protection products (PPP) by the development of and selection for improved disease and pest resistance in crops. Developing and delivering agronomic solutions to cope with lower PPP use is also critical.

Environmental and land use implications

Tillage farming has the lowest greenhouse gas (GHG) emissions of any production system in Irish agriculture, with some limited, but costly, scope to be reduced further. The more pressing environmental issues are to reduce the impact of tillage on water quality and biodiversity. New market opportunities, as well as the eco-schemes mooted for the new Common Agricultural Policy (CAP), will drive a wider diversity of cropping within the sector. These changes will help to:



TILLAGE CROPS (CONTINUED)

- improve targeting of inputs using integrated crop/pest management approaches;
- manage soils to increase soil health and reduce impacts on water quality;
- increase system nitrogen (N) use efficiency by use of legumes, organic manures and improved varieties; and,
- manage field boundaries/margins to enhance biodiversity.

Research and advisory actions required

The crop research and advisory objective of developing productive, competitive and sustainable production systems will be achieved by focusing primarily on:

- supporting the identification and development of novel varieties with increased resilience to abiotic/biotic stresses;
- maximising crop yield potential by developing our understanding of the soil, crop, management and climate factors that limit crop yield;
- reducing crop production costs by focusing on nutrient use efficiency, integrated disease control, machinery use, as well as weed, pest and lodging control;

- developing high-value markets for tillage crop products; and,
- developing precision farming approaches.

Comment

Increased climate and EU legislative challenges will continue to challenge the competitiveness and therefore the sustainability of Irish tillage farms. In response, integrated management approaches will be essential to maintain the competitiveness of tillage enterprises, while supporting long-term environmental goals.

Reference

*Wallace, Michael. 'Economic Impact Assessment of the Tillage Sector in Ireland.' (2020).

Contact

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

Table 1: Technical performance.

Factor	Sectoral average		Top 50% producers 2027*
	2016-2018	Target*	
GHG (tons CO ₂ -eq/ha) ^{1,2}	1.18	1.10	
Number of farmers following specific nutrient guidelines for crop production (percentage of total)	80%	90%	100%
Yield (t/ha) ³			
Winter wheat	9.7	10.3	10.6
Winter barley	8.8	10.0	10.2
Spring barley	6.6	7.2	7.4
Gross margin(€/ha) ³			
Winter wheat	€1,114	€1,200	€1,300
Winter barley	€931	€1,000	€1,100
Spring barley	€632	€650	€700
Net margin(€/ha) ³			
Winter wheat	€430	€450	€500
Winter barley	€346	€375	€425
Spring barley	€126	€150	€165
Income per labour unit ¹	€34,900	€45,000	€55,000

1. National Farm Survey: specialist tillage farms. 2. The figures are based on International Panel on Climate Change (IPCC) methodologies and do not include organic manures if applied. 3. National Farm Survey data. *Predicted values for 2027.

Note: fertiliser use efficiency and overall chemical N and P use will be aligned to the targets set out in the environment road map and national policy.