

tillage

Malting barley

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'Double Diamond works wonders, works wonders...today!'

If you're old enough you might remember this unforgettable slogan for a beer which was big in the 1980s. This deviation down memory lane was prompted by the fact that one of Ireland's premier malting barley areas, Ballycarney/Castledockerell, located halfway between Bunclody and Enniscorthy, forms a diamond shape out to the edges of Kiltaley.

It's the soil that works wonders for malting barley growers in the area. The Soil Survey of Ireland 1966 noted: "The soils of the Clonroche series have a wide use range, they are excellent for tillage and especially noted for their ability to produce high yields of good-quality malting barley. It is primarily these soils which have earned for Wexford the title of the 'Model County' and the reputation it enjoys for good tillage land."

Joseph Warren, Springvale, Ballycarney, farms 425 acres of owned/leased land and provides a stubble-to-stubble contracting service on another 500 acres. "We grow malting barley and seed malt barley 70%,



winter barley 5%, spring oats 5%, maize 5% and fodder beet 15%," he says. "Malting barley has traditionally been our largest crop but with the introduction of the BPS in 2015, crop diversification and greening has caused us to add other crops to the rotation.

"We grew beet for many years but with the demise of the sugar beet industry in 2006 we changed to fodder

beet and developed a good customer base for quality washed beet. There is a lot of work with the crop but it is showing good returns per hectare and also serves as a great break crop when you have seed crops on the farm."

Joseph is a member of the local tillage discussion group who are participating in the Knowledge Transfer scheme. "I find it to be a good source

Agricultural Catchments Programme

The area is participating in the Agricultural Catchments Programme where the focus is to monitor the effects of farming in that catchment and provide detailed analysis of the area. Farmers are learning a lot from it and get valuable information back from the catchments team.

It is a good farming area, as Eddie Burgess of the Catchments team puts it: "Farmers in this area always understood the value of soil fertility, especially lime, and didn't need to be told to use it."

Why is the area such a strong Till-

age area? A good place to start is the soil, the physiographic description is "rolling lowland", with a soil classification of acid brown earth which are generally referred to as the Clonroche series. The A horizon (0-6in cultivation layer) is loam to clay loam, a dark reddish brown in colour, medium crumb structure and very friable. This is the most extensive soil type in the county covering 40% of the area,

A desirable structure with good drainage characteristics which accounts for the fact that they are among the most often cultivated soils,

but they can be intensely leached and a characteristic feature is a sub-surface horizon of strong red brown colour enrichment by iron oxides leached from the upper horizons.

Summary of 2014 LPIS crop descriptions for Castledockerell

- 90.13% of the total catchment area IS covered by Land Parcel Identification Scheme (LPIS) parcels.

Of this LPIS area;

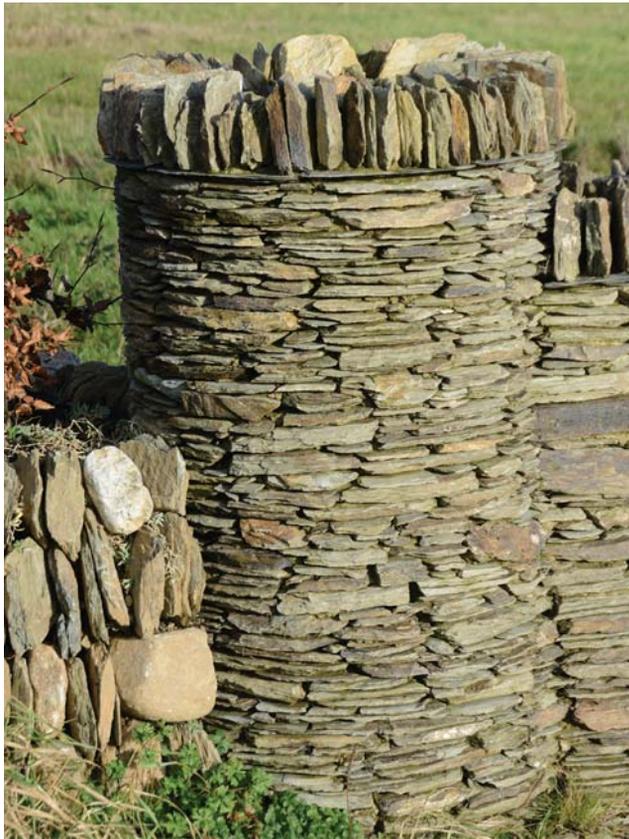
- 69.42% is tillage.
- 49.32% is spring barley – ie 71.05% of the tillage ground is in spring barley.

KEY TIPS

To achieve low-protein malting barley, the crop must be managed differently to normal feed crops. While seasonal factors such as an early or a late spring or rainfall are outside of your control there are husbandry factors which, if practised, will give the best chance of achieving the low protein specification.

- Management of the crop for high yield: achieving low protein requires a large dilution effect. The higher the yield of the crop, the more the protein will be diluted by crop yield.
- Field selection: a field in long-term tillage, with a history of low grain protein, that is capable of giving high yields is the obvious choice. Good fertility is essential with pH, P and K at optimum levels. Free-draining medium-textured soils produce the best combination of yield and quality such as the Clonroche series found in Wexford, Kinsale and Louth. Lighter soils, such as the sandy loam soils derived from sandstone in east Cork, are also suitable for producing low-protein barley. Heavier soils with higher soil nitrogen should be avoided.
- Nitrogen level: the more nitrogen available to the crop, the higher the protein in the barley will be.
 - Applied nitrogen: protein increases by 0.2% for every 10kg N/ha. Research from Teagasc Oak Park suggests that once you go over 120kg/ha the chances of achieving distilling specification drops off. It should be noted that there can be large variations and field history is the best guide.
 - Organic manures: avoid fields where organic manures were applied recently.
 - Previous cropping: it is difficult to predict the amount of nitrogen in the soil after a break crop, or from crops produced close to grass, in the rotation so these fields should be avoided if possible. Also avoid fields that had legumes in cover crop mixes.
- Sowing date: sow early but in good conditions. An added benefit of early sowing is that skinning is less likely to occur in susceptible varieties. Skinning can be a reason for rejecting a load.
- Husbandry: make sure disease and weed control are adequate and trace elements are supplied where required or as recommended after a recent soil test.

– **Ciaran Collins,**
Teagasc tillage specialist



ABOVE: the flat stones underlying the Clonroche series can lead to rapid movement of water through the soil profile.

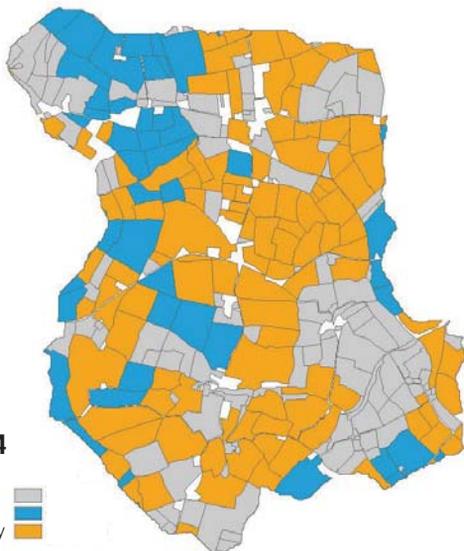
LEFT: Ciaran Hickey of Teagasc and Joseph Warren conduct plant counts in malting barley.

of technical information and completing a Machinery Cost Calculator and Profit Monitor has helped us to get an accurate picture on our costs and returns.”

Joseph has managed to achieve a very good handle on machinery costs per acre with the two main challenges being combine capacity during tight harvest periods, evident in 2017, and labour at busy times also. “The

machinery cost calculator is a valuable asset to look at different options for solving these challenges as any purchase of equipment in these times needs careful evaluation.

“We have found in the group that the variable costs – what most growers are spending on seed, fertiliser and sprays – are largely fixed and the fixed costs such as machinery are highly variable.”



LPIS 2014

Non-tillage
Other tillage
Spring barley

MALT PRODUCTION

100

Boortmalt malt growers in the area

15%

of total Boortmalt barley growers

14%

of overall tonnes of malting barley