

# More farms join Teagasc

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The Heavy Soils Programme was established in 2010 to develop the skills and technologies which can facilitate expansion and maximise profitability on farms with poorly drained soils. It is a collaboration between the participating farmers and Teagasc research and advisory personnel.

Initially, seven poorly drained dairy farms in high rainfall regions of the southwest were selected in partnership with Kerry Agribusiness, Dairygold Co-Op and Tipperary Co-Op. These farms are located in Doonbeg, Co Clare; Athea, Co Limerick; Lisselton and Castleisland, Co Kerry; Kishkeam and Ballinagree, Co Cork and Rossmore, Co Tipperary. A further farm (a beef enterprise) located in Crossmolina, Co Mayo, was added to the programme in 2014.

The programme is now expanding again to increase geographic spread and cater for a broader range of soil and climatic conditions. Two additional farms in Cavan and Monaghan have agreed to participate (see map).

The aim of the programme is to increase the profitability through increased grass production and utilisation. This involves a range of strategies, including the installation of land drainage systems, improved soil fertility and grassland management and the development of farm infrastructure, as well as prudent financial planning and risk management.

## Drainage

Land drainage is vital to reducing volatility and sustaining viable farm enterprises on poorly drained land. A site-specific drainage system (based on local soil type and conditions) has been installed on a site (approximately 2ha) on each of the participating farms.

These range in depth from 0.9m to 1.7m and are complimented by mole drains, gravel mole drains or subsoiling where appropriate.

The demonstration element of this work involves showcasing the works

carried out to farmers and contractors at public open days held on programme farms.

## Monitoring

Automated monitoring systems have been installed on participating farms to record weather (rainfall, evaporation, air and soil temperature, etc), drain flow rates, water table fluctuations and soil moisture content.

Gathering and analysis of these measurements will continue for a number of years. It will allow the effectiveness of the various drainage systems to be assessed in terms of drainage discharge rates and overall system performance over a range of seasons and weather conditions.

## Fertility

A whole farm evaluation of soil fertility, paddock by paddock, is also carried out following annual soil sampling and recording of all inputs and offtakes to monitor change over time. Results to date have shown that programme farms, in line with national trends, are handicapped by low pH, P and K levels.

The acidity of the soils means that improvements in fertility are hard won. Annual sampling is allowing for targeted improvement strategies for soil fertility and steady progress is being made.

## Carrying capacity

In 2011, the average herd size of the programme's dairy farms was 81 cows and this has risen to 96 in 2015. A full review of the farms found that the steady increase of three cows per annum has, on most farms, stretched the farm infrastructure to the limit.

Deficits in milking parlour, cow drafting and calving facilities, and calf-rearing accommodation were common on many farms. Bulk tank capacity, milk cooling capacity and slurry storage were also issues on some farms. All programme farms intend to increase cow numbers with an average herd size in 2020 predicted to reach 116. Given that farm infrastructure is already under pressure, considerable investment is required to allow for this growth. This will require careful consideration and planning.

Overall, the programme is developing management and investment strategies for dairy and beef farms on a range of poorly drained soils to increase profitability. This will benefit all farmers operating under similar restraints.



## Farmer focus

### David Brady, Stradone, Co Cavan

David runs a spring-calving dairy herd and poultry enterprise. He is married to Rachel and has three children Owen, eight, Daniel, six, and Kate, 15 months. David completed his Green Cert in 1996 at Teagasc Ballyhaise Agricultural College. He returned home that year and took over the poultry enterprise. In 2012, David took over the dairy enterprise. He farms a total of 59.97ha with a milking platform of 38.5ha.

Since 2012, David has been working on improving his land, particularly the milking block. He lost over 20ha of leased ground in 2014, which meant he needed to utilise more from his "owned" ground.

However, he was also fortunate enough to purchase 4.2ha beside the milking platform in 2014.

# Heavy Soils Programme



James O'Donoghue, David Brady, Stradone, Co Cavan (Heavy Soils participant) and Cian Devaney, Teagasc B&T Dairy Advisor, Ballyhaise.

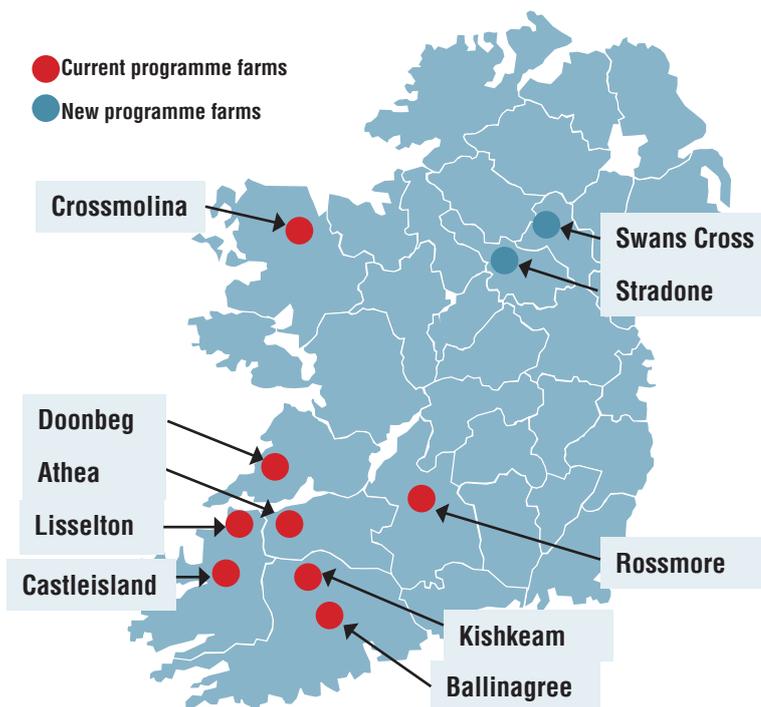


Table 1: Farm comparison

	James McMahon, Swans Cross, Co Monaghan	David Brady, Stradone, Co Cavan
Co-op	LacPatrick	Lakeland Dairies
Ha farmed	80.8ha	59.97ha
Milking platform (ha)	28.8ha	32.5ha
Milking platform SR (LU/ha)	3.05 LU/ha	2.25 LU/ha
Solids /cow	417	398
Concentrate kg / cow	835kg	930kg
Herd EBI	€84	€112

David admits he wasn't paying particular attention to the grazing block until the leased land was dropped. The set-back led to a renewed focus and David has since then worked relentlessly on drainage, reseeding, and soil fertility. "We've spread 200 tonnes of lime and reseeded over one third of the farm since 2013. This has allowed us to increase cow numbers from 60 to 80 over three years," he says. "Dairy farming on heavy ground is a constant challenge and over the next two to three years we plan to reseed the rest of the farm. Building soil fertility and enhancing drainage is crucial for long-term utilisation of grass."

## James McMahon, Swans Cross, Co Monaghan

James McMahon farms an 80ha dairy/beef enterprise beside Swans Cross in



James O'Donoghue, B&T Dairy Advisor Co Monaghan and James McMahon, Swans Cross Co Monaghan (Heavy Soils participant).

Co Monaghan. He is married to Mary and they have three children, Stephen, 14, Cian, nine and Nicole, two. James took over the 60-cow farm in 1997 after completing his Green Cert. Stock numbers have increased to 90 cows

on a 32ha milking platform, supplying LacPatrick Co-op.

Over the years, he has carried out drainage projects such as shoring and stone-moleing on parts of the farm. Soil tests are carried out each year and 200 tonnes of lime have been spread on the farm over the last five years.

"Early turnout in spring is difficult to achieve in our region, and continuous heavy rain in spring or summer can result in cows having to be rehoused," says James. "My motivation for becoming involved in the Heavy Soils Programme this year is to learn more about what can be done to manage the difficult soil conditions, in terms of drainage, in this region. I've seen through membership of my discussion group the benefits and savings that can be made by achieving a longer grazing season."