

Niall Canty and his father Denis are tillage farmers and contractors from Aherla, about 15 miles west of Cork city.

“About half of our land is in malt-ing barley and the remainder grows fodder beet or maize, which we sell to local dairy farmers,” says Niall.

“Since the abolition of milk quotas we have seen a major expansion in dairy cow numbers locally and this has led to a greater need for fodder. We grew sugar beet until the factory closed and, like many growers in the area, we mourned its loss, but ironically we are now growing almost as much beet as in the old days.

“In recent years customers have approached us looking for alternative sources of fodder and because we had the land and the machinery we have been able to oblige.”

The Cantys also grow a substantial area of maize which works well with their silage contracting business. They have their own harvester and maize planter so all field work is completed ‘in house’.

Most of the maize that Niall grows receives cattle slurry imported from the same farms that he is supplying the maize to. It is a great example of a ‘circular’ economy and works very well for all involved.

The livestock farmer is guaranteed excellent quality feed delivered into the yard without having to rent extra land, produced by growers with years of experience growing fodder crops. In turn, tillage farmers, like the Cantys, have markets for profitable break crops such as beet and maize

Farm-to-farm trading is built upon trusting relationships between both parties. Crops like maize are sold on a ‘per acre’ basis as opposed to ‘per tonne’, so it is important that the buyers feel they are getting value for money. The fertiliser value of slurry is a key part of the equation.

Managing slurry

Niall soil-tests regularly to make sure imported slurry is going where it is most needed. “We try to use as much slurry as we can on the maize,” he says. “It is a demanding crop and needs to be fertilised well so we can deliver the best crops possible to our customers.

“All of the slurry is spread using a dribble bar and ploughed in as soon as possible. We can do the whole operation as we have our own slurry equipment.”

Rapid incorporation prevents nitrogen loss through volatilisation, but it also ensures that the slurry doesn’t run off the surface in very wet weather.

Exporting slurry allows Niall’s



Niall Canty and his father Denis are tillage farmers based in Aherla, Co Cork, who have built a slurry and crops trading arrangement with dairy farmers.

Mutual benefits

Teagasc Arable Specialist **Ciaran Collins** and Advisor **Michael McCarthy** report on Cork tillage and dairy farmers working together in a textbook example of the ‘circular economy’ at work in farming

customers relief on their nitrates balance at the end of the year.

“The fact that I am able to import large volumes of slurry is nearly more important to some farmers than the crop itself – 20 acres of maize could need up to 100,000 gallons of slurry,” says Niall, “though exporting slurry alone may not be enough where their organic N reduction requirement is large.”

Niall completes a Nutrient Management Plan (NMP) annually so that he does not exceed his own farm’s total fertiliser allowance.

Key considerations

Cattle slurry is a valuable asset so any arrangement needs to be mutually beneficial. Who pays for transport and spreading? The time of year when slurry is spread and, if applicable, crop sale arrangements all need to be agreed prior to slurry movements. All slurry movements must be recorded on the DAFM Agfood system.

The core of any successful import/export arrangement is nutrient management planning by both farms. This will ensure inputs are

balanced against crop requirements to protect the environment and to comply with regulations. Up-to-date soil test reports are vital.

Slurry should be targeted to fields with low P (phosphorus) and K (potassium) status. Phosphorus in cattle and other livestock manure is considered to be 50% available in Index 1 and 2 soils whereas P is considered to be 100% available in (Index 3 soils).

P application in any form is not allowed on Index 4 soils. P is likely to be the limiting factor for tillage farmers importing slurry.

Livestock stocking rates, the amount of concentrate feed used on farm, crop yields and cropping history are other essential elements of a NMP.

Utilisation

Much of the value of slurry can be lost if it is not utilised properly. Capture of the ammonium N is critical to maximising the benefits. Applying slurry in the spring leads to the most efficient use of N.

Recent demonstrations on Teagasc tillage Signpost farms have shown that applying slurry on autumn-planted crops in the spring with low emission spreading equipment is highly effective. By applying the slurry to growing crops, retention of N is optimised.

To reduce ammonia losses, slurry should be incorporated immediately or at most within 3 – 6 hours of application. Simultaneously spreading slurry, and ploughing it in, is also a very efficient method of increasing N utilisation.

Capacity to store slurry on-farm is a distinct advantage. The recent budget announcement of an increased TAMS grant rate of 70% for those importing slurry with a contract in place will help in this regard.

Costs

Slurry is valuable, water is not. The nutrient value of slurry also varies considerably (see Table 1 above).

As a minimum, you should know the dry matter of the slurry you are spreading.

Laboratory analysis of a sample from a well agitated tank is the most accurate way to access the nutrient content of slurry.

However, a slurry hydrometer, which can be purchased for €50, will help predict the dry matter and give a guide on the nutrient content.

“The tillage man and the dairy man can both benefit,” concludes Niall Canty. “And we’re doing our bit for the environment too.”



Most of the maize grown on the Canty farm in Aherla, Co Cork, receives slurry from the farms the Cantys supply with the crop


Table 1: Available N, P and K Kg/m³ (units/1,000 gals) – LESS application¹

Cattle slurry	DM%	N	P	K
Average values	6.3	1.0 (9)	0.5 (5)	3.5 (32)
Range in values	0.4 – 11.9	0.1 – 2.1	0.1 – 1.1	0.5 – 7.7

Surveys of cattle slurry (dairy and beef farms) conducted by Berry et al., 2013



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