

Transition arrangement is at an end



It is now more important than ever that farmers who import pig slurry know at the start of the year how much slurry they can use without exceeding the restrictions on organic nitrogen

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The spreading of pig slurry is regulated under the Good Agricultural Practice for Protection of Water Regulations (SI 31 of 2014). Under these regulations, the transition arrangement ended in December 2016. This arrangement allowed farmers exceed the crop requirement for phosphorus (P) by 3kg/ha if the excess arose from the application of pig or poultry manure or spent mushroom compost.

This will have implications for farmers who use pig slurry from 2017 onwards. It is now more important than ever that farmers who import pig slurry know at the start of the year how much slurry they can use without exceeding the restrictions on organic nitrogen (N) (170kg/ha) and the P limits that apply to their farm. The only way to achieve this is by having the calculations done early in the year.

Table 1: Nutrient content and value of pig slurry (4.3% solids)

	N	P	K
Nutrient content (kg/m ³)	4.2	0.8	2.2
Nutrient availability (%)	50	100	100
*Fertiliser cost per kg (€)	0.96	2.31	0.78
Value of each nutrient (€)	2.02	1.85	1.72

Note: 1m³ equals 220 gallons.

*Based upon chemical fertiliser prices in February 2016

Table 2: Cost per cubic metre of slurry spread with 3,000 gallon slurry tanker, or delivered in the case of a 6,000 gallon truck

Distance	3,000 gallon slurry tanker	6,000 gallon truck
3 miles or 5km	€2.57	–
5 miles or 8km	€3.56	–
10 miles or 16km	€6.20	€3.76
15 miles or 24km	–	€4.88
20 miles or 32km	–	€6.00

Conclusion: Farmers may save money if they use locally available organic fertilisers effectively (i.e. to replace the nutrients contained in chemical fertilisers) to grow their crops. You should get your adviser/consultant to do a fertiliser plan to maximise the potential savings for your farm.

The value of pig manure as a fertiliser depends on how much chemical fertiliser is replaced as well as the cost of the chemical nutrients replaced. The fertiliser value of pig manure at 4.3% solids is €5.59/m³ when there is a requirement for N, P and potassium (K) – see Table 1.

This translates into €25.37 per 1,000 gallons. A reasonable rule of thumb is that a thousand gallons of pig slurry is equivalent to a bag of 19:7:20. A lorry tanker conveying 25m³ or 5,500 gallons will contain nutrients to the value of €145 based on 4.3% solids.

1,000 gallons is equivalent to a bag of 19:7:20

The EU Good Agricultural Practice for Protection of Waters Regulations (often referred to as the nitrate regulations) were reviewed in 2014, giving some benefits to farmers using pig slurry.

The new Statutory Instrument (SI 31 of 2014) came into effect on 31 January 2014. A number of requirements in these regulations are summarised briefly below:

- The P requirement for crop growth depends on the stocking rate of the grassland (i.e. if it is less than 85, between 86 to 130 or between 131 to 170kg organic N/ha).
- No organic fertiliser may be imported if the stocking rate is above 170kg/ha.
- If hay or silage is sold off, the farm allowance can now be factored in for extra P required to grow these forage crops.
- The first 300kg of concentrate fed to each grazing livestock unit (i.e. 85kg organic N) is now discounted in calculating the P from concentrates fed to grazing livestock.
- The availability of P is considered to be only 50% if used on soils with a P index of 1 or 2 as per the Morgan's extractable P test. So if you have low P levels in your soils, it is an ideal fertiliser.

Use pig slurry to save money

If you use chemical P on your farm, it will greatly reduce the volume of



Raymond Moloney, Ballinaspittle, Co Cork, with his sons Killian and Gavin. Read Raymond's pig slurry advice on P24-25.



pig slurry you may use on your farm. Two field demonstrations run by Teagasc in 2014 showed savings of over €100/ha (i.e. €40 to €50 saved in fertiliser costs per acre).

It is important that you know the volume of pig slurry you may use in compliance with the nitrate regulations to ensure maximum savings in fertiliser costs.

You should have a fertiliser plan done by your own agricultural adviser or consultant. Let the pig farm manager/owner know how much pig slurry you will need as early in the year as possible.

Transport costs

Transport and spreading costs should be included when assessing any savings made if using an organic fertiliser.

Research at Moorepark modelled the loading, transport and spreading of slurry in different situations of a standard slurry tanker and using a truck to transport the slurry longer distances.

These will vary greatly based upon

the distance travelled and the tanker size used to draw the slurry.

Table 2 is a summary of the costs associated with a 3,000-gallon slurry spreader (based on a contractor cost of €50/hour) and 6,000-gallon lorry delivering slurry to a storage tank (using a cost of €72/hour here).

There are a number of assumptions factored into this model relating to transport speed with full loads on the outgoing journey and empty tanks on the return journeys.

So it is cost-effective based on the model assumptions to have pig slurry delivered and spread on land if the recipient farmer is drawing it and spreading it up to nine miles or 14km away from the pig farm (i.e. the cost to transport and spread it does not exceed the nutrient value of €5.59/m³ as shown in Table 1).

Likewise the use of a transport truck to deliver it, will allow the slurry be brought a greater distance from the pig farm – up to approximately 18 miles (or 29km) from the farm before the value of the slurry being transported is outweighed by its' value.



Teagasc B&T advisor Eileen Casey with Raymond Moloney, Ballinspittle, Co Cork. Read Raymond's pig slurry advice on P24-25.