

Low Emission Slurry Spreading

- **Objective:**

Improve the use of organic fertiliser on the farm

Reduced nitrous oxide emissions, ammonia emissions and odours.



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Low Emission Slurry Spreading

- **Background:**

Low emission technology improves the utilisation efficiency of slurry compared to the traditional splash-plate.

Other benefits include, reduced phosphorus run-off,

Reduced tainting of the grazing sward and reduced smell from slurry spreading.



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The Role of LESS on Silage Fields

- Cutting silage removes large amounts of nutrients e.g. K from the fields. While slurry has high levels of P and K so it makes sense to replace the lost nutrients with the use of slurry.
- With the use of LESS slurry can account for 30% of needed N to produce slurry. Helping to reduce costs of chemical nitrogen and fertilizers.

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Low Emission Slurry Spreading

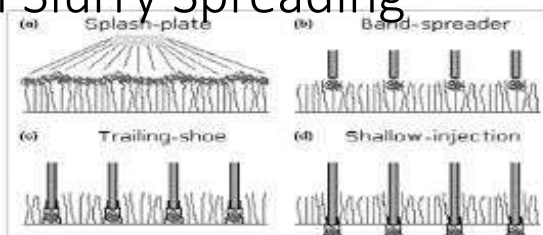


Figure 4: Slurry application methods (a) on top of herbage and over entire spreading width with splash plate method, (b) in lines on top of herbage with band-spreader method, (c) in lines below herbage, but above the soil surface, with the trailingshoe method, and (d) below the soil surface (approximately 5 cm)



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The Role of LESS to Balance Soil Nutrients

- With intense grazing of land soil fertility can be impacted but applying slurry with dribble bar or trailing shoe the nutrients in slurry are utilized properly and can balance the low levels of P&K

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Low Emission Slurry Spreading



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Low Emission Slurry



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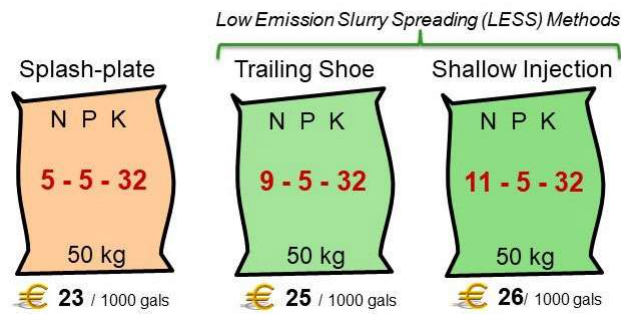
How much N is available in
1,000gals cattle slurry spring
applied by LESS?

- A** - 6 units / 1,000gals
- B** - 9 units / 1,000 gals




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Economic Benefit



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Fertiliser Replacement Values

Available Nutrient Values			Factors to Consider
Nutrient	kg/m ³	units/ 1,000gals	<ul style="list-style-type: none"> ✓ Slurry dilution with water? ✓ Slurry DM[§] -10 fold variation ✓ 
N	1.0	9	
P	0.5	5	
K	3.5	32	
DM%	6.3	6.3	

[§]DM, dry matter %

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Slurry Dilution vs. N-P-K Value

The effect of slurry DM on the N, P & K Values of cattle slurry			
DM %	N kg/m ³ <i>(units/1,000 gals)</i>	P kg/m ³ <i>(units/1,000 gals)</i>	K kg/m ³ <i>(units/1,000 gals)</i>
2	0.4 (4)	0.21 (2)	1.4 (13)
4	0.7 (6)	0.35 (3)	2.3 (21)
6	1.0 (9)	0.5 (5)	3.5 (32)
7	1.1 (10)	0.6 (6)	4.0 (36)

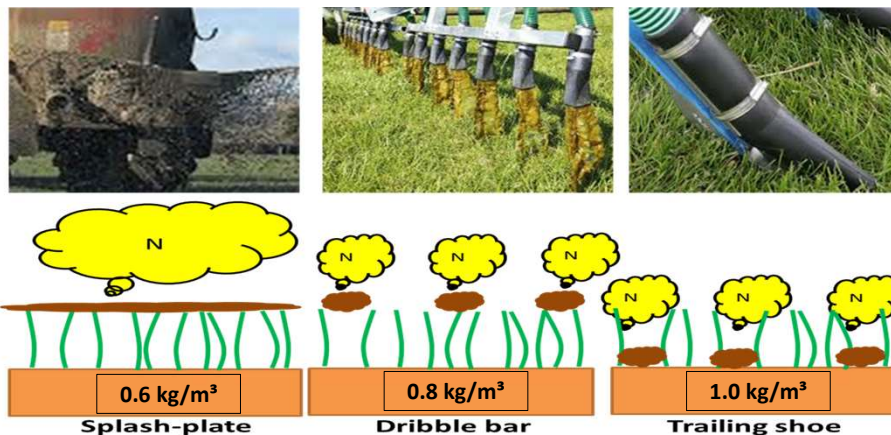
Slurry Testing?
Determine actual N - P - K



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Reducing slurry N losses

N value with different slurry application methods



Dribbler Bar / Trailing Shoe Benefits

- Less grass contamination / More precise app. of nutrients
- Increased Flexibility -Spread on higher grass covers
- Wider window of application / better soil condition

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The Role of Slurry

- No.1 – Silage Fields
- No.2 – Heavy covers removed from grazing block
- No. 3 Grazing Area to Balance P & K's across farm

