

Fertilising 2nd Cut Grass Silage

May, 2018

Second cut silage is planned on many farms to replenish silage reserves for the coming winter. This crop tends to be lower yielding compared to first cut silage. Where 1st cut has been cut it is important to ensure that 2nd cut crops are fertilised adequately to ensure a good yield of grass at harvest time.

Cattle slurry may not have been applied to 1st cut silage crops due to weather and soil conditions. Aim to apply cattle slurry after 1st cut silage to replenish soil P and K removed. Where a 2nd cut of silage is planned consult with table 1 to see N, P & K manure replacement values. Maximise cattle slurry application at this time of the year so that slurry tanks are emptied before next winter. Cattle slurry applied by splashplate in June will have a lower nitrogen (N) value compared to low emission application techniques see table 1 below for N values.

Table 1:-Available N, P K values for Cattle & Pig Slurry (units/1,000 gallons)				
Manure type	Application Method	N	P	K
Cattle slurry (7% DM)	Splashplate	3	5	32
Cattle slurry (7% DM)	Low Emission	6	5	32
Pig slurry (4% DM)	Splashplate	13	7	20
Pig slurry (4% DM)	Low Emission	19	7	20

Fertilise 2nd cut grass silage based on crop yield potential. Table 2 below shows the fertiliser requirements based on a grass dry matter yield of 2 to 4t DM /ha (4 to 8t fresh grass/ac). Suggested fertiliser programmes are shown with and without cattle slurry.

Table 2:- 2 nd Cut Silage N, P & K Req. (off-takes) ^{3,4} Based on Grass Yield & Fertilizer Programmes					
Grass Yield (ton DM/ha) ²	N kg/ha (units/ac)	P kg/ha (units/ac)	K kg/ha (units/ac)	Fertilizer Options ¹	
				No Slurry ¹	Cattle Slurry gal/ac
2 (4t/ac fresh grass) ⁵	50 (40)	8 (6)	50 (40)	2 bags/ac 15-3-20	1,500gals/ac 1 bags/ac CAN
3 (6t/ac fresh grass) ⁵	75 (60)	12 (10)	75 (60)	3 bags/ac 15-3-20 0.75 bags/ac CAN	2,000gals/ac 2 bags/ac CAN
4 (8t/ac fresh grass) ⁵	100 (80)	16 (13)	100 (80)	4 bags/ac 15-3-20 0.75 bags/ac CAN	2,500gals/ac 2.75 bags/ac CAN

¹ Protected urea can replace CAN as N source. ² Apply 4kg P & 25kg K per tonne of grass dry matter (DM). ³ N, P & K advice for crop off takes based on grass DM yield at harvest time. ⁴ Apply additional P & K for soil fertility build after grass harvest refer to Teagasc Green Book for specific rates. ⁵ Fresh grass @ 20% DM.

Building Soil P & K in silage fields

Apply additional P and K (soil build-up rates) to index 1 and 2 soils after 1st or 2nd cut silage in late summer. For example 16% P (Super P) or 50% K (Muriate of Potash) or 0-7-30 are very suitable fertilisers for building soil P and K's levels. Alternatively cattle or pig slurry / FYM to replenish soil P and K's, adjust slurry P & K availability (Index 1 & 2 P - 50% & K - 90% available) based on soil index.

Don't Forget Sulphur (S)

For 2nd cut grass silage crops apply 10 to 15kg S/ha per cut.