Fertilising 2nd Cut Grass Silage

May, 2019

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 heavy grass covers this spring. 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 slurry N values based on application techniques (Trailing shoe / band spreader). Cattle slurry applied by splash plate in June will have lower nitrogen (N) value compared to low emission (+ 3 units / 1,000 gals) application techniques. Maximise cattle slurry application at this time of the year so that slurry tanks are emptied before next winter.

Table 1:- Available N, P & K values for Cattle & Pig Slurry (units/1,000)

Manure Type	Application Method	N	P	K
Cattle Slurry (7% DM)	Low Emission	6	5	32
Cattle Slurry (7% DM)	Splashplate	3	5	32
Pig Slurry (4% DM)	Low Emission	19	7	20
Pig Slurry (4% DM)	Splashplate	13	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:- 2nd 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[6]
2 (4t/ac fresh grass)[5]	50 (40)	8 (6)	50 (40)	2 bags/ac 15-3-20 0.25 bag/ac ProUrea	1,500gals/ac 0.8 bags/ac ProUrea
3 (6t/ac fresh grass)[5]	75 (60)	12 (10)	75 (60)	3 bags/ac 15-3-20 0.4 bag/ac ProUrea	2,000gals/ac 1.2 bags/ac ProUrea
4 (8t/ac fresh grass)[5]	100 (80)	16 (13)	100 (80)	4 bags/ac 15-3-20 0.5 bag/ac ProUrea	2,500gals/ac 1.6 bags/ac ProUrea

[1] Protected urea (Urea 40% + 6% + NBPT). [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. [6] Slurry applied with low emission applicator.

Don't Forget Sulphur (S)

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

Prepared by Mark Plunkett, Johnstown Castle