

What is the acidity levels in your soils?

Lime planning – First step to good soil fertility!

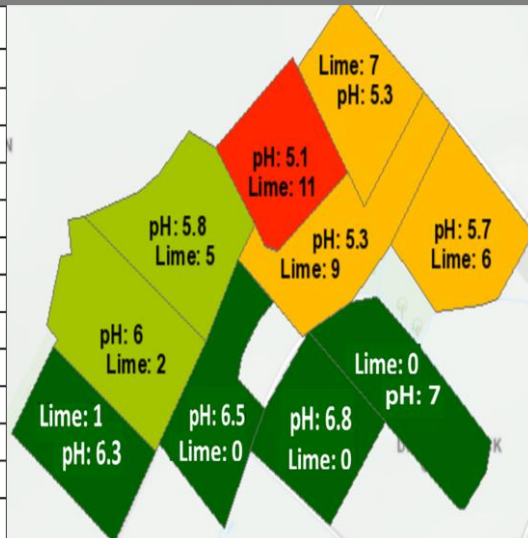
Target grassland pH: 6.3 mineral soils, 5.8 peats

Planning lime applications

- What field, What lime type, What rate & When?
- Utilize all opportunities to apply lime

Farm Liming Plan

Field No.	Soil pH	Lime (t/ha)	Lime Total (t)	Time of Application		
				2016	2017	2018
1	5.1	11	55	30		25
2	5.3	7.0	35	20		15
3	5.3	9.0	45	25		20
4	5.7	6.0	30	30		
5	5.8	5.0	25		25	
6	6.0	2.0	10		10	
7	6.3	1.0	(5)			Re-Test
8	6.5	0	0			
9	6.8	0	0			
10	7.0	0	0			
Total Lime (t)			200	105	35	60
Total Cost (€)			€5,000	52.5%	17.5%	30%




How much N-P-K is in cattle slurry?

Dilute Slurry				Standard Slurry				Thick Slurry			
4% Dry Matter				6% Dry Matter				8% Dry Matter			
N	P	K		N	P	K		N	P	K	
kg/ha	kg/ha	kg/ha		kg/ha	kg/ha	kg/ha		kg/ha	kg/ha	kg/ha	
Application rate: 11 m ³ /ha (1,000 gallons/ac)											
5	4	23	€34	8	5	32	€47	10	7	40	€61
Application rate: 33 m ³ /ha (3,000 gallons/ac)											
16	11	70	€102	23	15	95	€140	30	20	121	€180





Selecting suitable N-P-K fertiliser?

<u>Grazing (1:2)</u>	<u>Silage (1:5)</u>	<u>Build-up</u>
18-6-12, 25-5-5, 27-2.5-5,	0-7-30, 13-6-20, 24-2.5-10,	23-10-0 [P] 10-10-20 [P-K] 0-0-50 [K]

P & K to replace grazing off-take

Stocking Rate (LU/ha)	1.5-2.0	2.0-2.5	2.5-3.0	> 3.0
	Dairy Milking platform P – K advice			
P - K kg/ha	14 – 30	19 – 35	23 – 40	27 – 45
P - K units/ac	11 – 24	15 – 28	18 – 32	22 – 36

P-K-S removed by silage?

Grass Silage (t DM/ha)	1	3	5
	x5 	x15 	x25 
P kg/ha	4	12	20
units/ac	3.2	9.6	16
K kg/ha	25	75	125
units/ac	20	60	100
S kg/ha	3	9	15
units/ac	2.4	7.2	12

Fertiliser Programmes – What & When?

	Dairy SR: 2.5 LU/ha 210 kg/ha O.N.	Fert. Split	N	P	K	S	Example Fertiliser Prog.
			kg /ha				Bags/ac
Total annual advice			250	19	40	20	Soil P & K Maintenance only
1	Jan - Feb	1 st	20				1/3 Bag Protect-Urea
	March	2 nd	35	10	20	7	1 1/2 Bags 18-6-12
2	April	or 1 st cut 3 rd	45				3/4 Bag Protect-Urea
	May	Silage 4 th	40	4.5	10	6.5	1 1/4 Bag 27-2.5-5 +S
3	June	or 2 nd cut 5 th	35	4.5	10	6.5	1 1/4 Bag 27-2.5-5 +S
	July	Silage 6 th	25				1/3 Bag Protect-Urea
4	August	7 th	25				1/3 Bag Protect-Urea
	September	8 th	25				1/2 Bag Protect-Urea



Return on Investment (4:1)

- ✓ Utilise more grass (grazing or silage)
- ✓ Reduce concentrate feed purchases