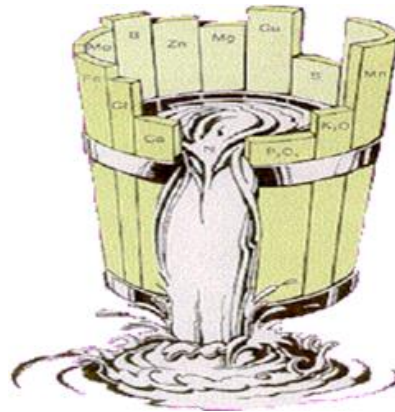


## A blue plastic funnel is shown, filled with several cigars. A single cigar is being dropped into the funnel from above. The funnel is placed on a grassy surface.

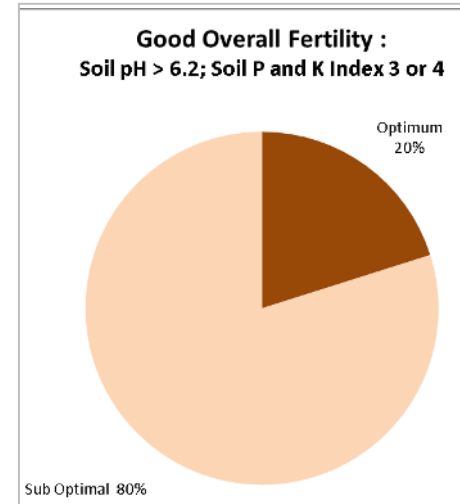
[illegible]

# Nutrient Efficiency – Factors

- Soil Testing
- Soil pH & Liming
- Farm Nutrient Requirements
- Utilising Cattle Slurry
- Selecting Fertiliser Types
- Nutrient Application Programmes

# 1. Soil Testing - Foundation

- ~ 200,000 soil samples
- Soil fertility (pH, LR, P & K)
- Monitor soil fertility changes
  - Index 1's to Index 4's (take action)
- Response to nutrient applications



## 2. Soil pH & Lime



# Double Dividend!

- Increases nutrient availability

- Soil N release

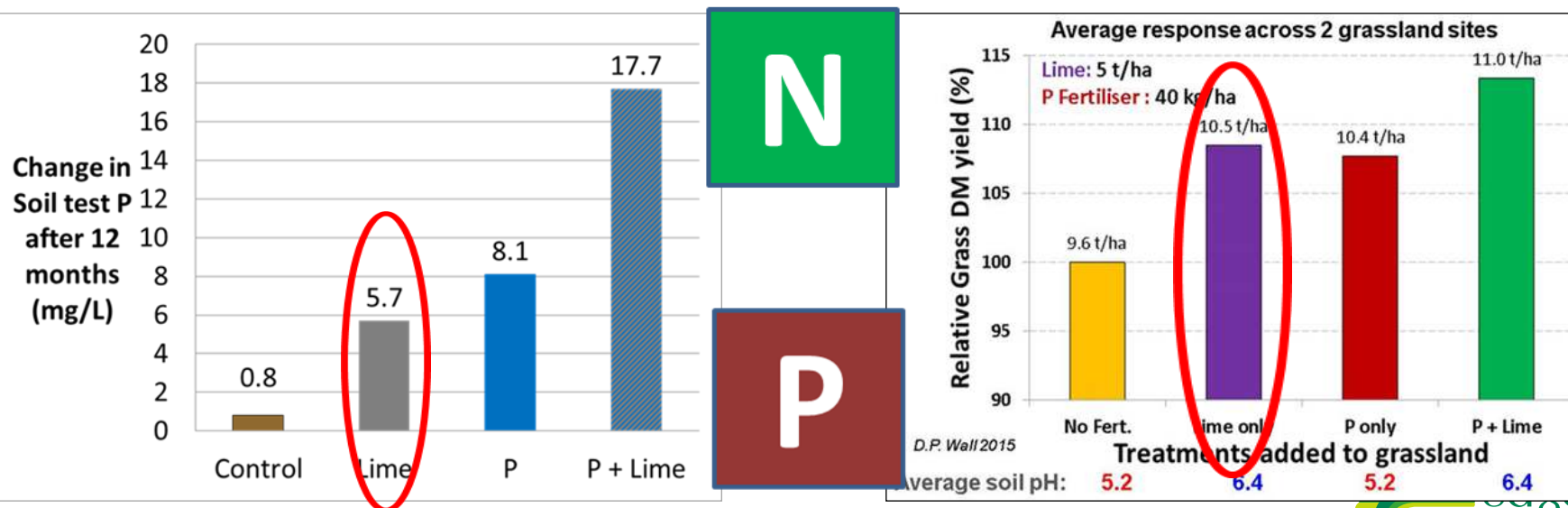
- 70kgN/ha/year (€70/ha)

- Increases soil P fertility / availability

- Index 1 to Index 2 (10kg P / €25/ha)

~ 50kg P to  
move 1mg / L  
Index 1 to 2  
150 kg P /ha  
Costs -  
€300/ha

Lime  
Costs  
€25/ha/yr



# 3. Farm Nutrient Requirements

- Completing a farm fertiliser plan
- Lime advice & plan
- N, P, K & S advice – Rates & Timings
- Farm soil fertility review
- Soil Fertility Mapping
- Meeting farm CC req.'s

A screenshot of a farm fertiliser plan spreadsheet. The spreadsheet has a yellow header with the text 'Farm Fertiliser Plan' and 'Nutrient Requirements'. It contains columns for 'Crop', 'Fertiliser', 'Rate', 'Timing', and 'Total'. The data is organized in rows, with some cells highlighted in green. The spreadsheet is titled 'Farm Fertiliser Plan' and 'Nutrient Requirements'.



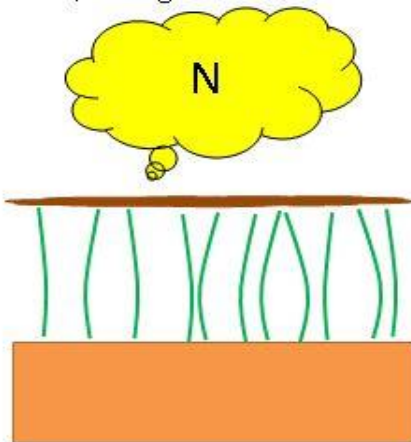
# 4. Efficient Use of Cattle Slurry



# Method of Application & Timing



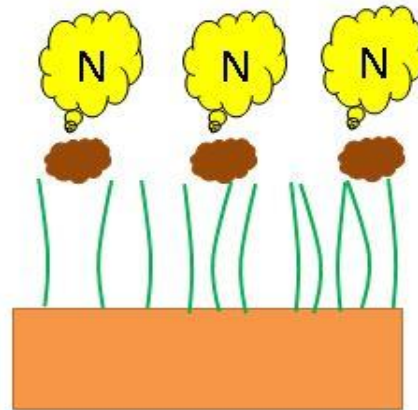
	Spring	Summer
Units N/1000 gal	6	3



**Splash-plate**



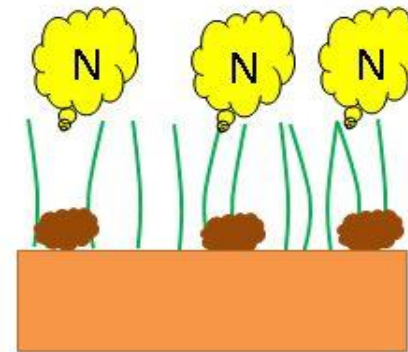
	Spring	Summer
Units N/1000 gal	9	6



**Dribble bar**



	Spring	Summer
Units N/1000 gal	9	6



**Trailing shoe**

**Spring  
Application**

cloudy



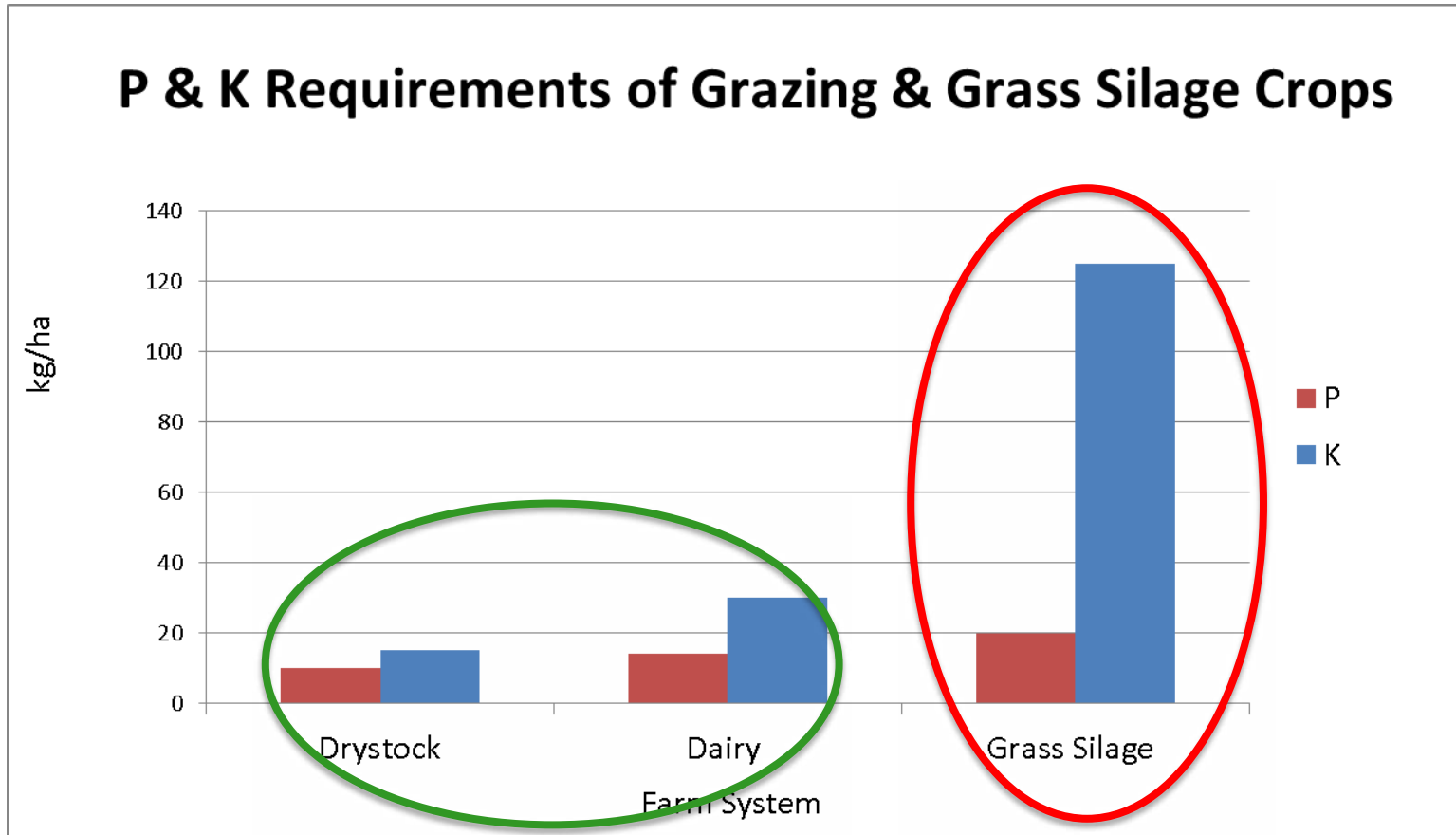
sunny

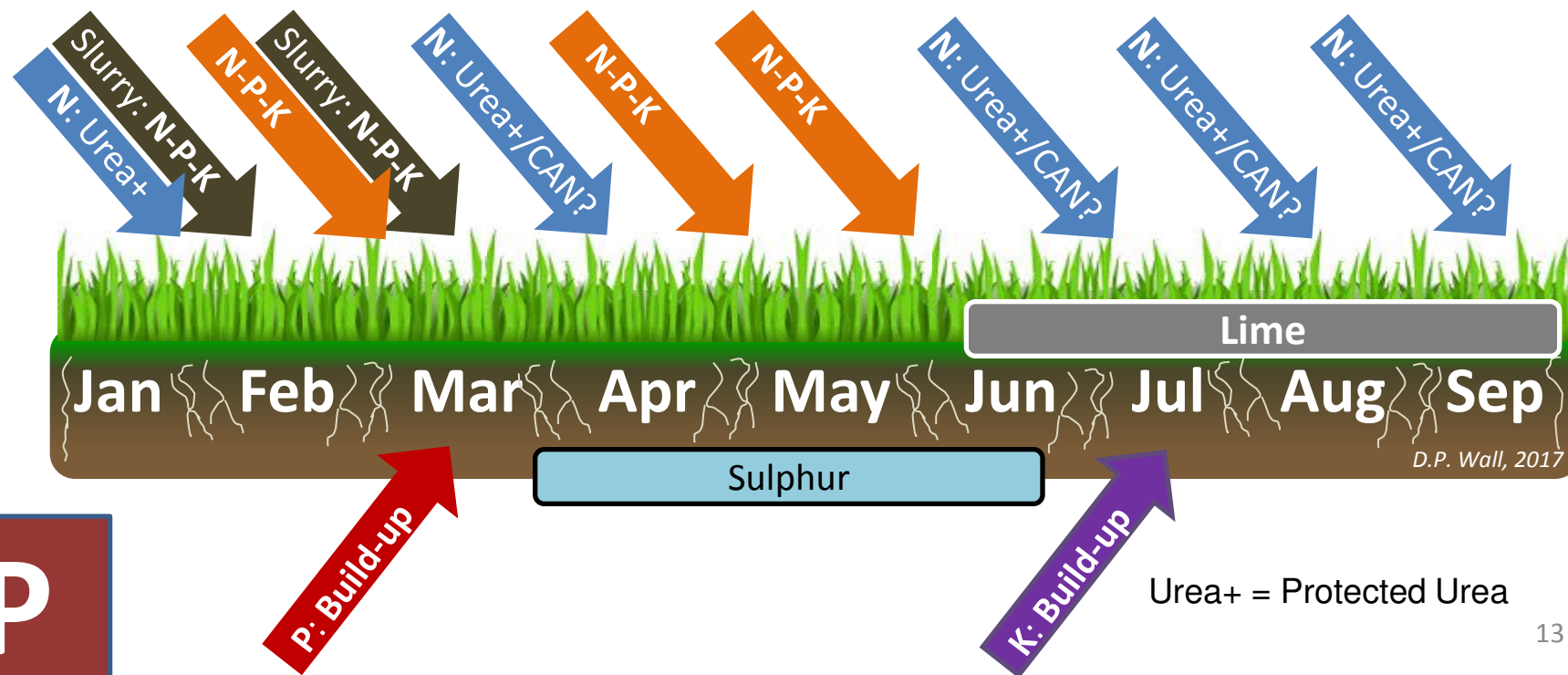
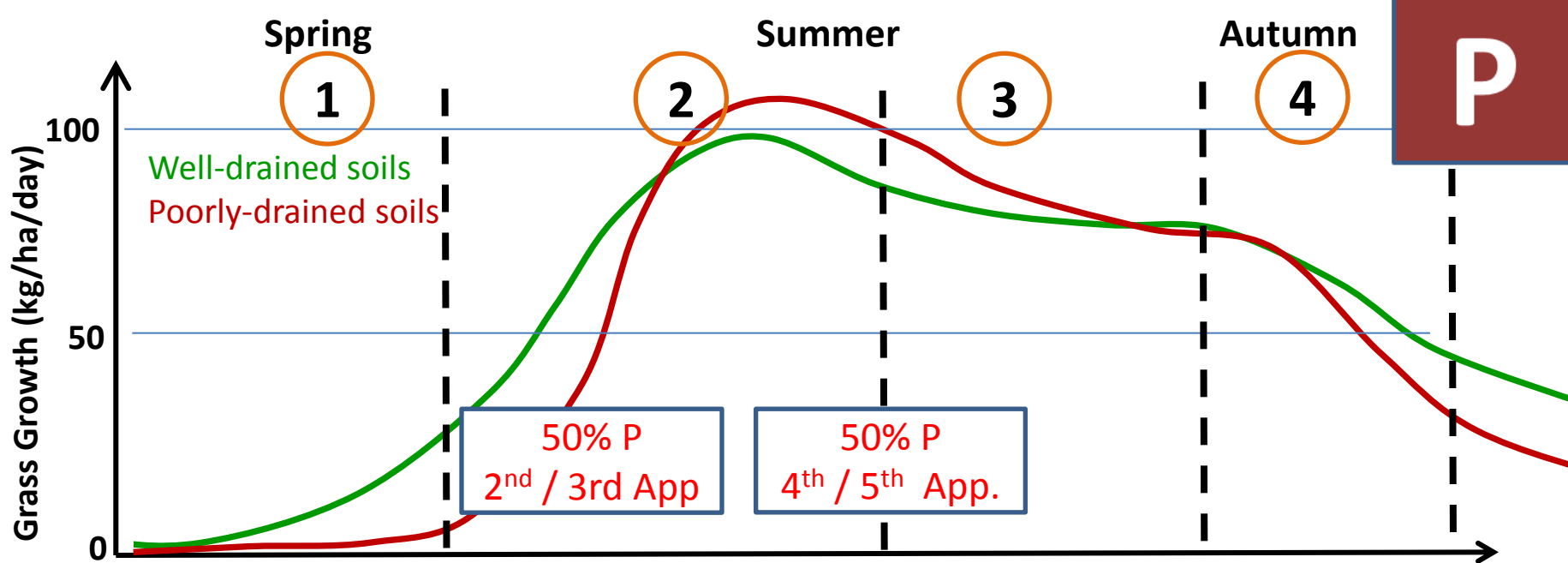


**Every 1m<sup>3</sup> = 1kg N**



# 5. Grass P & K Req. (Index 3)





# Farm Fertiliser.. Types

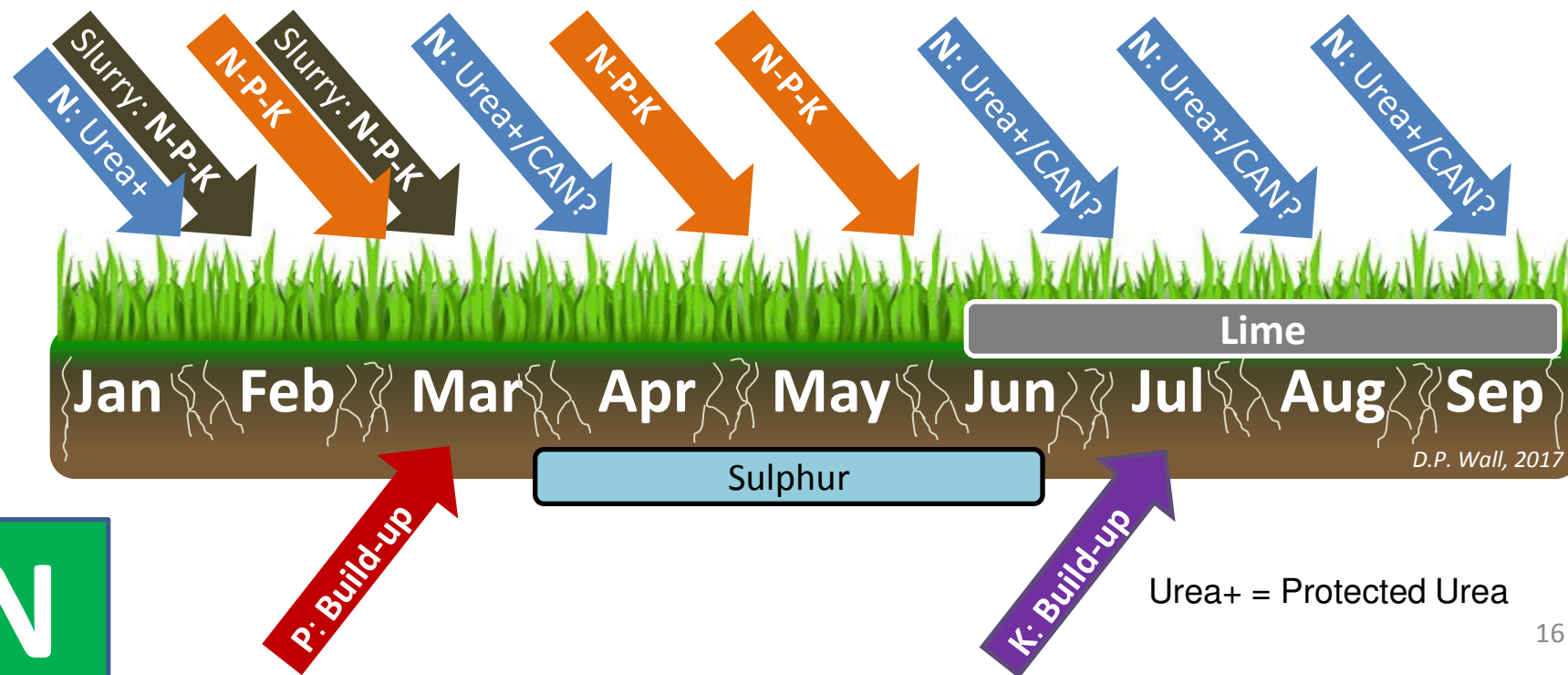
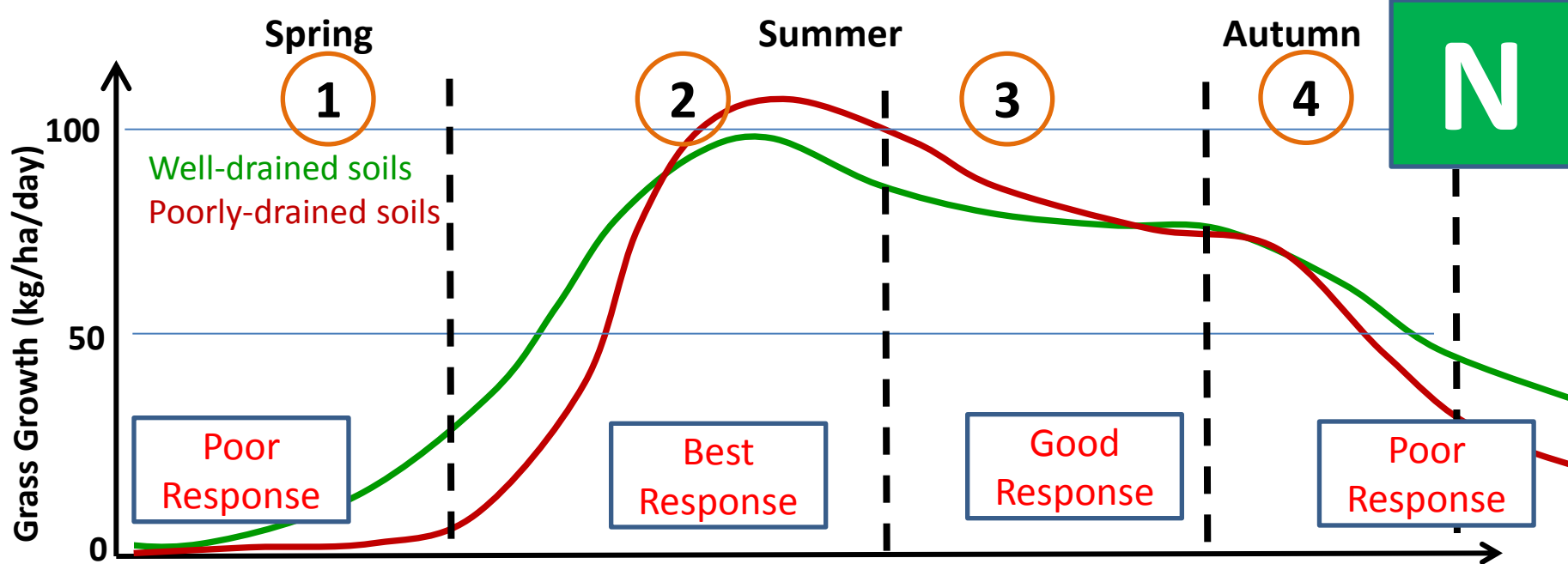
- Protected Urea 46% } **Nitrogen Source**

- 18-6-12 +S
  - 23-10-0 +S
- P & K Sources  
Grazing**



- Cattle Slurry
  - 6-5-32
  - Top Up Options
    - 24-2.5-10 +S
    - 27-2.5-5 +S
- P & K Sources  
Silage areas**







# 6. Fertiliser Programme

N, P & K Advice (kg/ha) & fertiliser products (kg/ha) – **Free Draining Soil**

Farm stocked at **210kg Org N/ha** or 2.5 LU/ha

**Soil P Index 2 and K Index 2** Feeding 2.5 t/ha Conc. Feed – P adjustment (- 9kg P/ha)

Advice		Feb	March	April	May	June / July	Sept	Total kg/ha
Product (kg/ha)		ProUrea 55 kg/ha	18-6-12+S 300 kg/ha	ProUrea 120 kg/ha	18-6-12+S 300kg/ha	ProUrea 60 kg/ha	ProUrea 60 kg/ha	
N	250	25	54	55	54	28	28	244
P	37		18		18			36
K	65		36		36			72
S	20		9		9			18

Early P

Mid-Season P

# In Summary

- Soil test results & nutrient decisions / planning
- Lime – The 1<sup>st</sup> Step – Priming / Conditioning soils
- Prepare farm fertiliser plan & Consult regularly
- Recycle all cattle slurry on silage area
- Identify crop nutrient requirements
- Select a suitable fertiliser blends to match the soils & crops on your farm



# For Further Information

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## Soil & Soil Fertility

The health of our soil is a key component to the efficient utilisation of soil nutrients in the production of food in an environmental and sustainable manner.



## What's New

- [3rd Cut Grass Silage N,P,K,S \(PDF\)](#)
- [Teagasc Soil Fertility Report 2020 \(PDF\)](#)
- [Protected Urea - Cost Efficient N May 2020 \(PDF\)](#)
- [Fertiliser Programme Kg Ha Soil P Build Up \(PDF\)](#)
- [Signpost series protected urea- Webinar presentation \(PDF\)](#)
- [Protected Urea List- May 2020 \(PDF\)](#)
- [Common Nutrient Deficiencies n Spring Cereals No.2 \(PDF\)](#)
- [Common Nutrient Deficiencies in Spring Cereals No.1 \(PDF\)](#)
- [Importance of Sulphur \(S\) for Grass & Crop Production \(PDF\)](#)
- [Grassland Other Nutrients \(PDF\)](#)
- [Protected Urea – Cost Efficient N \(PDF\)](#)
- [Pig Manure Booklet 2020 \(PDF\)](#)
- [Organic Manure N P & K Values 2020 \(PDF\)](#)
- [Fertiliser programme kg ha 2020 April Update \(PDF\)](#)
- [Protected Urea List April, 2020 \(PDF\)](#)
- [Fertiliser Advice for Grass Establishment \(PDF\)](#)
- [W Cereal Fertiliser Advice Update 2020 \(PDF\)](#)
- [1st Cut Grass Silage N P K Req's \(PDF\)](#)
- [Technical Bulletin No.5 Potassium \(PDF\)](#)
- [Q & A Protected Urea December 2019 \(PDF\)](#)
- [Early Nitrogen Advice Grassland \(PDF\)](#)
- [Protected Urea List- December 2019\(PDF\)](#)
- [Have we turned the corner with national soil fertility? \(PDF\)](#)
- [Efficient Use of Phosphorus In Agriculture Tech Bulletin \(PDF\)](#)
- [Major & Micro Nutrient Advice For Productive Agricultural Crop](#)