

Fertiliser Programmes

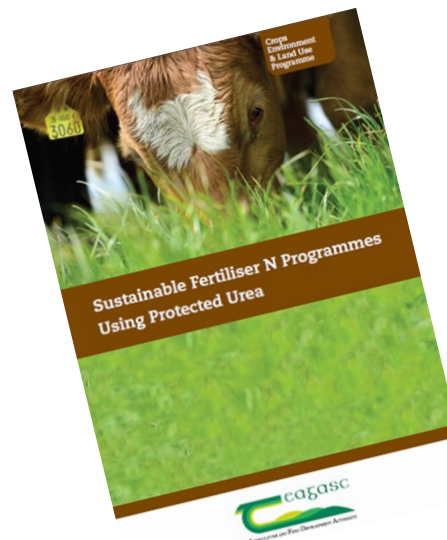


- Fertiliser Products
- Timings of Application
- Suggested Programmes

Table 1:- Outlines recommended rates of N, P & K for a dairy farm stocked 0.8 LU /ac (170kg Org N/ha or 2.0LU/ha). Soil P and K levels assumed to be index 3

| Advice | March | April | May | June / July | Sept | Total Units/ac | |
|--------------------|-------------------------|---------------------------|------------------------|----------------------------|-----------------------|----------------|--------|
| Product (units/ac) | 1.75 bags/ac 18-6-12 | 1.0 bag/ac ProUrea + S | 0.65 bag/ac ProUrea | 0.75 bag/ac ProUrea + S | 0.6 bag/ac ProUrea | | |
| N | 160 | 32 | 40 | 30 | 30 | 27 | 159 |
| P | 11 | 11 | | | | | 11 |
| K | 24 | 21 | | | | | 21 |
| S | 12 | | 6 | | 5 | | 11 |
| Cost €/ac | 34 | 20 | 35 | 38 | 32 | | €96/ha |

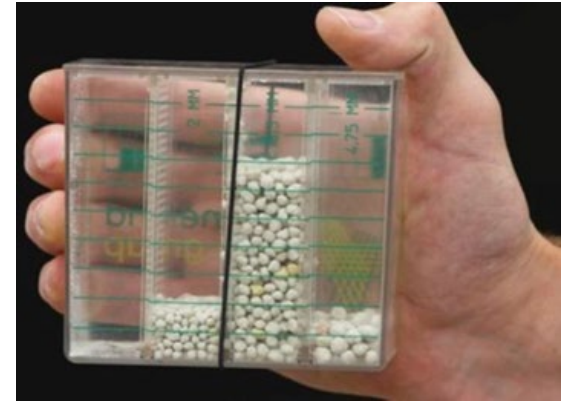
ProUrea = Urea 46% + NBPT / 2-NBPT, Cost/tonne = €430/t, ProUrea 40% N & 6% S- €400t/, 18-6-12 - €385, Urea - €390, CAN - €285. To convert units/ac to kg/ha multiply by 1.25



Urea

| Fertiliser Size (mm) | | |
|---|---|---|
| <2mm | 2.00 to 3.3mm | 3.3 to 4.75 |
|  |  |  |

- 46% N / Granular Product
- Lower cost / kg
- Calibrate Fertiliser Spreader
- Protected Urea Available with
 - K & S



Sustainable Fertiliser N Products

| Company | Product Name | Inhibitor Type | N% | P % | K% | S% |
|--------------------------------------|------------------------|----------------|----|-----|----|-----|
| Grassland Fertilisers (Kilkenny) IFI | Topper N Protect | NBPT | 46 | | | |
| | Super Topper N Protect | NBPT | 38 | | | 7.5 |
| Grassland Agro | Eco Urea | NBPT | 46 | - | - | - |
| | Eco N 38 | NBPT | 38 | - | - | 7.6 |
| | Eco 29-0-14 +S | NBPT | 29 | - | 14 | 2 |
| | Alzon Neo-N | 2-NPT + MPA | 46 | - | | |
| | Alzon Neo-N + S | 2-NPT + MPA | 40 | | | |
| Goulding Fertiliser | KaN | NBPT | 46 | - | | |
| | KaN + S | NBPT | 38 | - | | |
| | KaN + S | NBPT | 35 | - | | |
| | KaN + K +S | NBPT | 29 | | 14 | 5.5 |
| Target Fertilisers | UreaMax | NBPT | 46 | - | - | - |
| | UreaMax + S | NBPT | 40 | - | - | 6 |
| Yara | Yara Vera AMIPLUS | NBPT | 46 | - | - | - |

**LIMUS
NBPT &
NPPT**

Fertiliser Compound....

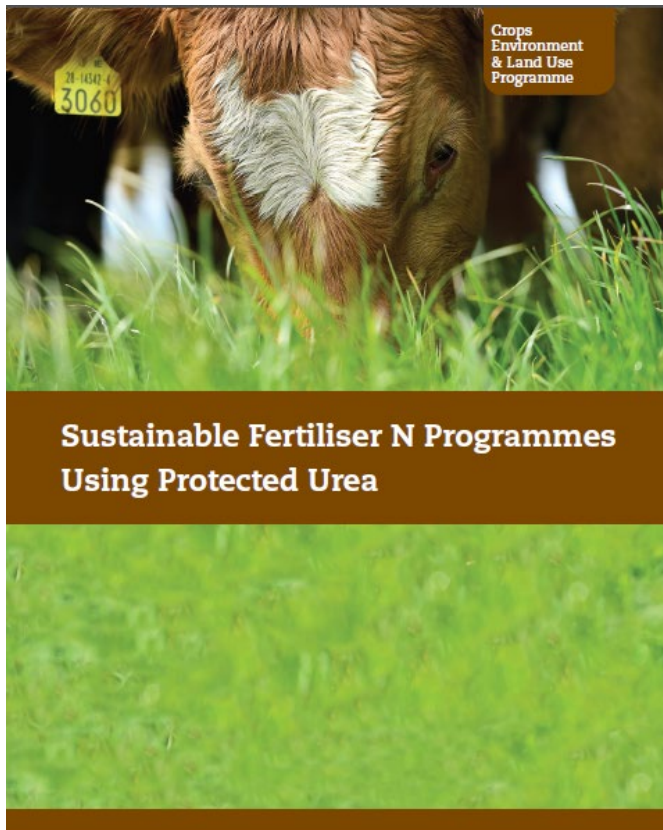
| Situation | Fertiliser Type |
|---------------------------|---|
| Grazing | 10-10-20 / 18-6-12 / 18-4-12 / 14-7-14 / 15-10-10 / DAP (18N & 20 P) / 25-5-0 |
| Silage / Maize | 0-7-30 / 10-10-20 / 13-6-20 / 15-3-20 / 27-2.5-5 / 24-2.5-10 |
| P & K Build-Up | 10-10-20 / MOP 50% K / 16% Super P / 0-7-30 / 0-10-20 / 23-10-0 |
| Fertiliser Blends | Any Fertiliser can be made Max. 40 units in 50kg bag |

Fertiliser Plan NMP-Online



- Fertiliser advice programme
- Lime advice
- N, P & K Advice
- Fertiliser shopping list for 2020
- Meet requirements for cross compliance

Integrating Protected Urea into Fertiliser programmes



The 2 main sources of N used on Irish farms are CAN & Urea. Due to possible N losses as either nitrous oxide (from CAN) or ammonia (from urea) under poor soil / weather conditions that promote N loss. Urea treated with a urease inhibitor (NBPT / 2-NPT) reduces both ammonia & nitrous oxides losses helping to reduce their impact on both air & water quality.

Example fertiliser programmes integrating protected urea as the main N source during the growing season for both dairy & drystock farms at different stocking rates.

Table 1:- Outlines recommended rates of N, P & K for a dairy farm stocked 0.8 LU /ac (170kg Org N/ha or 2.0LU/ha). Soil P and K levels assumed to be index 3

| Advice | March | April | May | June / July | Sept | Total Units/ac |
|--------------------|-------------------------|---------------------------|------------------------|----------------------------|-----------------------|----------------|
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ProUrea = Urea 46% + NBPT / 2-NBPT, Cost/tonne = €430/t, ProUrea 40% N & 6% S - €400t/, 18-6-12 - €385, Urea - €390, CAN - €285. To convert units/ac to kg/ha multiply by 1.25



Example Dairy - N, P & K Rates

P Rates adjusted for 1t/ha Conc. Feed (5kg/ton)

| Stocking Rate 131 – 170 kg Org N/ha | | | |
|-------------------------------------|------------------|---------|---------|
| P & K Index | N | P | K |
| | Kg/ha (units/ac) | | |
| 1 | 202 (162) | 31 (25) | 90 (72) |
| 2 | 202 (162) | 21 (17) | 60 (48) |
| 3 | 202 (162) | 11 (9) | 30 (24) |
| 4 | 202 (162) | 0 | 0 |

Complete a Farm Fertiliser to determine farm N, P & K advice

Example Grazing Ground & Fertiliser Programme

SR 131 – 170 kg Org N/ha (P & K Index 1)*

| Advice | | Feb | March | April | May | June / July | Sept | Total |
|------------------------------|-------------|-----|---------------------------------|-----------------------|----------------------------|------------------------|----------------------------------|-------|
| Product (units/ac) | | | 1.5 bag/ac 18-6-12 + S | 0.9 bag/ac Urea | 2.0 bag /ac18's S | 0.75 bag/ac Urea | 24-2.5- 10 /ac bag Urea | |
| N Splits | | | 27 | 42 | 34 | 34 | 25 | |
| N | 162 | | 27 | 41 | 36 | 34 | 24 | 162 |
| P | 25 | | 9 | | 12 | | 2.5 | 24 |
| K | 72 | | 18 | | 24 | | 10 | 52 |
| S | 6-12 | | 4.5 | | 6 | | | 11 |

Example

Drystock - N, P & K Rates

P Rates adjust for 1t/ha Conc. Feed (5kg/ton)

| Stocking Rate 131 – 170 kg Org N/ha | | | |
|-------------------------------------|------------------|---------|---------|
| P & K Index | N | P | K |
| | Kg/ha (units/ac) | | |
| 1 | 165 (132) | 31 (25) | 75 (60) |
| 2 | 165 (132) | 21 (17) | 45 (36) |
| 3 | 165 (132) | 11 (9) | 15 (12) |
| 4 | 165 (132) | 0 | 0 |

Complete a Farm Fertiliser to determine farm N, P & K advice

Example Grazing Ground & Fertiliser Programme

SR 131 – 170 kg Org N/ha (P & K Index 1)*

| Advice | | March | April | May | June / July | Aug | Sept | Total |
|------------------------------|-------------|---------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------------|-------|
| Product (units/ac) | | 0.5 bag Urea /ac | 1.5 bag/ac 18-6-12 +S | 1.0 bag/ac 18-6-12 +S | 1.0 bag/ac 18-6-12 +S | 0.5 bag /ac Urea | 0.5 bag /ac Urea | |
| N Splits | | 23 | 31 | 20 | 16 | 22 | 20 | 132 |
| N | 132 | 23 | 27 | 18 | 18 | 23 | 23 | 132 |
| P | 25 | | 9 | 6 | 6 | | | 21 |
| K | 60 | | 18 | 12 | 12 | | | 42 |
| S | 6-12 | | 4.5 | 3 | 3 | | | 11 |

1st Cut Grass Silage N, P & K Req. (5tDM/ha)

Nutrient Requirements

1 t Grass DM Req. 4kg P & 25kg K

Fertiliser Options

| Soil Index | N (kg/ha) | P (kg/ha) | K *(kg/ha) | No Slurry | Cattle Slurry @ 3,000ga/ac |
|------------|-----------|-----------|------------|--|----------------------------|
| 1 | 125 | 40 | 175 | 430 kg/ha 13-6-20 170kg/ha Urea + S (6%) | 310kg/ha Urea + S (6%) |
| 2 | 125 | 30 | 155 | 370 kg/ha 13-6-20 190kg/ha Urea + S (6%) | 310kg/ha Urea + S (6%) |
| 3 | 125 | 20 | 125 | 370 kg/ha 13-6-20 190kg/ha Urea + S (6%) | 310kg/ha Urea + S (6%) |
| 4 | 125 | 0 | 0 | 310 kg/ha Urea + S (6%) | 310 kg/ha Urea + S (6%) |

**Apply P & K balance after 1st cut (June / July / Aug)*

In Summary

- Select suitable fertiliser compounds to deliver P, K & S.
- Apply 50% of P in Spring
- Apply remaining P (50%) in 2/ 3 splits
- Apply protected urea in straight N splits
- Calibrate fertiliser spreader