

Grazing Fertiliser Programmes for 2020 – Dairy & Drystock

Over the last 8 years Teagasc have conducted research on protected urea (urea + urease inhibitor NBPT). Results shows that protected urea consistently produces grass yields and nitrogen efficiency that matches that of CAN based fertiliser programmes. Protected urea reduces both GHG's and ammonia losses and is the No. 1 technology to meet environmental sustainability commitments.

Below are example fertiliser programmes integrating protected urea during the growing season for dairy & drystock farms at different stocking rates.

Dairy		Table 1:- Outlines recommended rates of N, P & K (kg/ha) & fertiliser products (kg/ha). Farm stocked at 210kg Org N/ha or 2.5LU/ha). Soil P and K levels assumed to be index 1						
Advice		Feb	March	April	May	June / July	Sept	Total kg/ha
Product (kg/ha)		55 kg/ha ProUrea	310 kg/ha 18-6-12+S	125 kg/ha Pro Urea	310 kg/ha 18-6-12	60 kg/ha ProUrea	96kg/ha 29-0-14	
N	250	25	56	58	56	27	28	250
P	39		19		19			38
K	95		37		37		13	87
S	15		9		9			18
Cost €/ha		21	115	48	115	23	37	€359/ha
<i>ProUrea = Urea 46% + NBPT, Cost/tonne = €380/t, ProUrea 40% N & 6% S- €380t/, 29-0-14 + S - €380, 29-0-14 - €370 18-6-12+ 3% S - €370, 18-6-2 - €360. To convert units/ac to kg/ha multiply by 1.25. Apply 100kg/ha of MOP 50% once every 5 years.</i>								

Dairy		Table 2:- Outlines recommended rates of N, P & K (kg/ha) & fertiliser products (kg/ha). Farm stocked at 210kg Org N/ha or 2.5LU/ha. Soil P and K levels assumed to be index 2						
Advice		Feb	March	April	May	June / July	Sept	Total kg/ha
Product (kg/ha)		55 kg/ha ProUrea	310 kg/ha 18-4-12+S	125kg/ha Pro Urea	310 kg/ha 18-4-12+S	60 kg/ha Pro Urea	60 kg/ha ProUrea	
N	250	25	56	58	56	27	28	250
P	29		12		12			24
K	65		37		37			74
S	12		9		9			18
Cost €/ha		21	109	48	109	23	23	€333/ha
<i>ProUrea = Urea 46% + NBPT, Cost/tonne = €380/t, ProUrea 40% N & 6% S- €380t/, 29-0-14 + S - €380 18-4-12+ 3% S - €350, 18-4-2 - €340. To convert units/ac to kg/ha multiply by 1.25.</i>								

Note :-Complete a farm fertiliser plan to determine max. N & P allowances as per nutrient legislation for your farm. Consult with your advisor on grass silage fertiliser programmes.

Drystock		Table 3:- Outlines recommended rates of N, P & K (kg/ha) & fertiliser products (kg/ha). Farm stocked at 130kg Org N/ha or 1.5LU/ha. Soil P and K levels assumed to be index 1 .					
Advice		March	April	May	June /July	Sept	Total Kg/ha
Product (kg/ha)		63 kg/ha ProUrea	125 kg/ha 18-6-12 +S	125 kg/ha 18-6-12 +S	125 kg/ha 18-6-12 +S	60 kg/ha 29-0-14+S	
N	112	29	23	23	23	18	116
P	27		8	8	8		24
K	70		15	15	15	8	53
S	10		4	4	4	2	14
Cost €/ha		11	46	46	46	23	€172/ha
<p><i>ProUrea = Urea 46% + NBPT, Cost/tonne = €380/t, ProUrea 40% N & 6% S- €380t/, 29-0-14 + S - €380 18-6-12+ 3% S - €370, 18-6-2 - €360. To convert units/ac to kg/ha multiply by 1.25. Apply 125kg/ha of MOP 50% once every 4 years.</i></p>							

Drystock		Table 4:- Outlines recommended rates of N, P & K (kg/ha) & fertiliser products (kg/ha). Farm stocked at 170kg Org N/ha or 2.0LU/ha. Soil P and K levels assumed to be index 1 .					
Advice		March	April	May	June / July	Sept	Total kg /ha
Product (kg/ha)		185 kg/ha 18-6-12+S	185 kg/ha 18-6-12+S	125kg/ha 18-6-12	95 kg/ha ProUrea	60 kg/ha ProUrea	
N	160	33	33	23	44	28	161
P	30	11	11	8			30
K	75	22	22	15			59
S	12	5	5				10
Cost €/ac		68	68	46	36	23	€241/ha
<p><i>ProUrea = Urea 46% + NBPT, Cost/tonne = €380/t, ProUrea 40% N & 6% S- €380t/, 29-0-14 + S - €380 18-6-12+ 3% S - €370, 18-6-2 - €360. To convert units/ac to kg/ha multiply by 1.25. Apply 125kg/ha of MOP 50% once every 4 years.</i></p>							

Drystock		Table 4:- Outlines recommended rates of N, P & K (kg/ha) & fertiliser products (kg/ha). Farm stocked at 130kg Org N/ha or 1.5LU/ha. Soil P and K levels assumed to be index 2					
Advice		March	April	May	June /July	Sept	Total Kg/ha
Product (kg/ha)		63 kg/ha ProUrea	125 kg/ha 18-6-12 +S	125kg/ha 18-6-12 +S	50kg /ha ProUrea	60 kg/ha 29-0-14+S	
N	112	29	23	23	23	18	116
P	17		8	8			16
K	40		15	15		8	38
S	10		4	4		2	10
Cost €/ha		24	46	46	19	23	€158/ha
<i>ProUrea = Urea 46% + NBPT, Cost/tonne = €380/t, ProUrea 40% N & 6% S- €380t/, 29-0-14 + S - €380 18-6-12+ 3% S - €370, 18-6-2 - €360. To convert units/ac to kg/ha multiply by 1.25.</i>							

Drystock		Table 4:- Outlines recommended rates of N, P & K (kg/ha) & fertiliser products (kg/ha). Farm stocked at 170kg Org N/ha or 2.0LU/ha. Soil P and K levels assumed to be index 2					
Advice		March	April	May	June / July	Sept	Total kg /ha
Product (kg/ha)		165 kg/ha 18-6-12+S	165 kg/ha 18-6-12+S	75 kg/ha Pro Urea	80 kg/ha ProUrea	60 kg/ha ProUrea	
N	160	30	30	35	37	28	160
P	20	10	10				20
K	45	20	20				40
S	12	5	5				10
Cost €/ac		61	61	29	30	23	€204/ha
<i>ProUrea = Urea 46% + NBPT, Cost/tonne = €380/t, ProUrea 40% N & 6% S- €380t/, 29-0-14 + S - €380 18-6-12+ 3% S - €370, 18-6-2 - €360. To convert units/ac to kg/ha multiply by 1.25.</i>							

Is protected urea more costly?

No, prices in € per tonne fertiliser and € per kg N delivered for the two main fertiliser N types available as per 21st February, 2020.

Fertiliser N Product	N content (%)	Cost per tonne (€)	Cost/kg N (€)
Protected urea	46%	380	0.82c
CAN	27%	250	0.92c

Note :-Complete a farm fertiliser plan to determine max. N & P allowances as per nutrient legislation for your farm. Consult with your advisor on grass silage fertiliser programmes.