

Protected Urea - Cost Efficient N



What is protected urea?

Protected urea (ProUrea) is urea which is treated with a urease inhibitor. The urease inhibitor can be either a) coated onto the outside of the fertiliser granule or b) incorporated into the urea granule melt during manufacture.

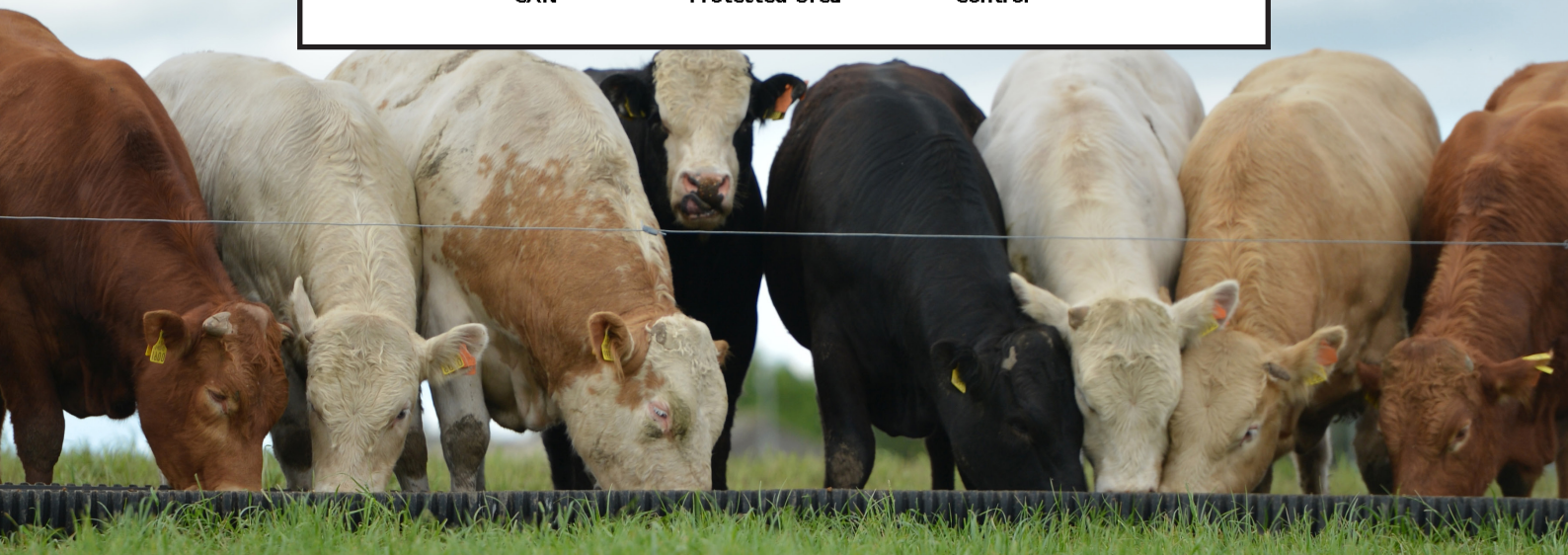
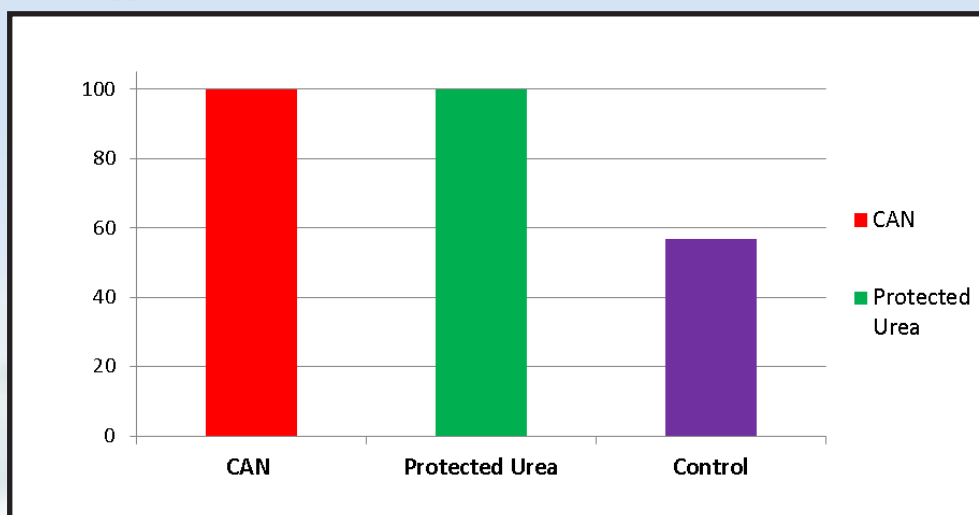
Why Protected Urea for Grasslands?

Protected Urea has **lower nitrous oxide (N₂O) emissions** compared to CAN & lower **ammonia (NH₃) losses** compared to urea. Never has pressure for agriculture to reduce these losses been greater and protected urea is a practical cost effective solution.

Grass Yield & Performance?

Teagasc research demonstrates that protected urea consistently and reliably produces **top yields** under spring and summer growing conditions (Figure 1).

Figure 1:- Average relative grass yields for CAN and Protected Urea (Urea+NBPT) across 6 grassland sites and 30 fertiliser application dates.



How much is a kg of Protected Urea-N?

At present protected urea gives a cost saving of **14%** compared to CAN.

N Type	Urea 46% N + NBPT	CAN (27% N)
Cost / kg (April 2020)	0.80c	0.93c

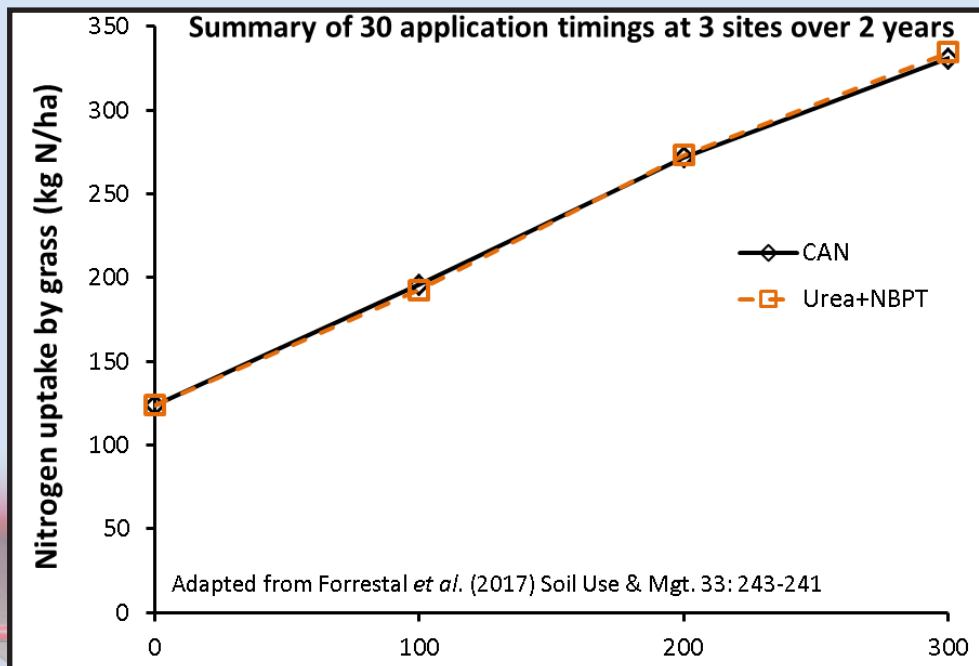
Considerations when spreading Protected Urea?

1. Set up and calibrate fertiliser spreader correctly, check bout width due to lower bulk density. If you can spread urea you can spread protected urea
2. Fertiliser with **80% of granules 2 to 4mm** in size

When to apply Protected Urea?

1. Use protected urea as main straight N / N & S source
2. Protected urea can be applied in spring, summer & autumn (within spreading period dates) (see figure 2)

Figure 2:- N recovery efficiency of protected urea matches CAN over the season.



Where can I get a list of protected urea products?

At present 18 product options are available from six fertiliser manufacturers. (See list on next page)

Find out more here www.teagasc.ie/crops/soil--soil-fertility/

Protected Urea – Why now?

View short video at: <https://www.youtube.com/watch?v=prU9s43PfkE>

Fertiliser products available on the Irish market containing a protected form of urea (N)

Company	Product Name	Inhibitor Type & Name	N %	P %	K %	S %	Na %
Grassland Fertilisers (Kilkenny) IFI	IFI Topper N-Sure	NBPT + NPPT (LIMUS)	46	-	-	-	-
	IFI Super Topper N-Sure	NBPT + NPPT (LIMUS)	38	-	-	7	-
	IFI Topper Boost N-Sure	NBPT + NPPT (LIMUS)	29	-	14	3.8	-
Grassland Agro	Eco Urea	NBPT + NPPT (LIMUS)	46	-	-	-	-
	Eco N 38	NBPT + NPPT (LIMUS)	38	-	-	7.6	-
	Eco 29-0-14 +S	NBPT + NPPT (LIMUS)	29	-	14	2	-
	Alzon Neo-N	2-NPT + MPA	46	-	-	-	-
	Alzon Neo-N + S	2-NPT + MPA	40	-	-	6	-
Goulding Fertiliser	Sustain / KaN	NBPT (Agrotain)	46	-	-	-	-
	Sustain / KaN	NBPT (Agrotain)	38	-	-	7	-
	Sustain / KaN	NBPT (Agrotain)	29	-	14	3.5	-
	Sweet Sustain	NBPT (Agrotain)	35	-	-	5	5
NitroFert	Nitro Guard	NBPT + NPPT (LIMUS)	46	-	-	-	-
	Nitro Guard	NBPT + NPPT (LIMUS)	38	-	-	7	-
	Nitro Guard	NBPT + NPPT (LIMUS)	30	-	15	2	-
Target Fertilisers	UreaMax	NBPT + NPPT (LIMUS)	46	-	-	-	-
	UreaMax + S	NBPT + NPPT (LIMUS)	38	-	-	7	-
	29-0-14+4% S Max	NBPT + NPPT (LIMUS)	29	-	14	4	-
Yara	Yara Vera AMIPLUS	NBPT (AMIPLUS)	46	-	-	-	-