

# Protected Urea

## The fit and tips for your farm

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# What is Protected urea?

- Standard urea protected from ammonia loss using a **Urease inhibitor**
- Like slurry, urea loses ammonia – that's loss of N you paid for
- Counts toward national emissions
- Urea loses 15.5% on average
- Protected urea c. 3.3%
- C. 12% cut in protected urea rate vs urea is possible while delivering the same “effective N” of the plant



**Tip: Protected urea is like “LESS” for urea but without the equipment and with very high efficacy**



# Is there a Greenhouse Gas saving?

- Yes, compared to CAN
- Cut the emission factor by 73%
- Amounts of N saved are small but counts big for emissions



**Tip: Protected urea and clover are fertiliser solutions now**

# Where does Protected Urea Fit on your Farm?



- 50 dairy farmers
- 20 suckler farmers
- 10 calf to beef farmers
- 8 sheep farmers



**Substitute for Urea and CAN**

- 7 Arable farmers

**Substitute for Urea (if using)**

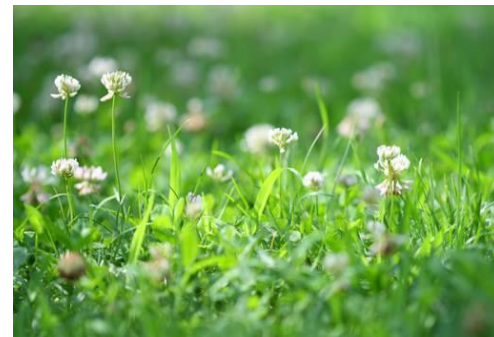
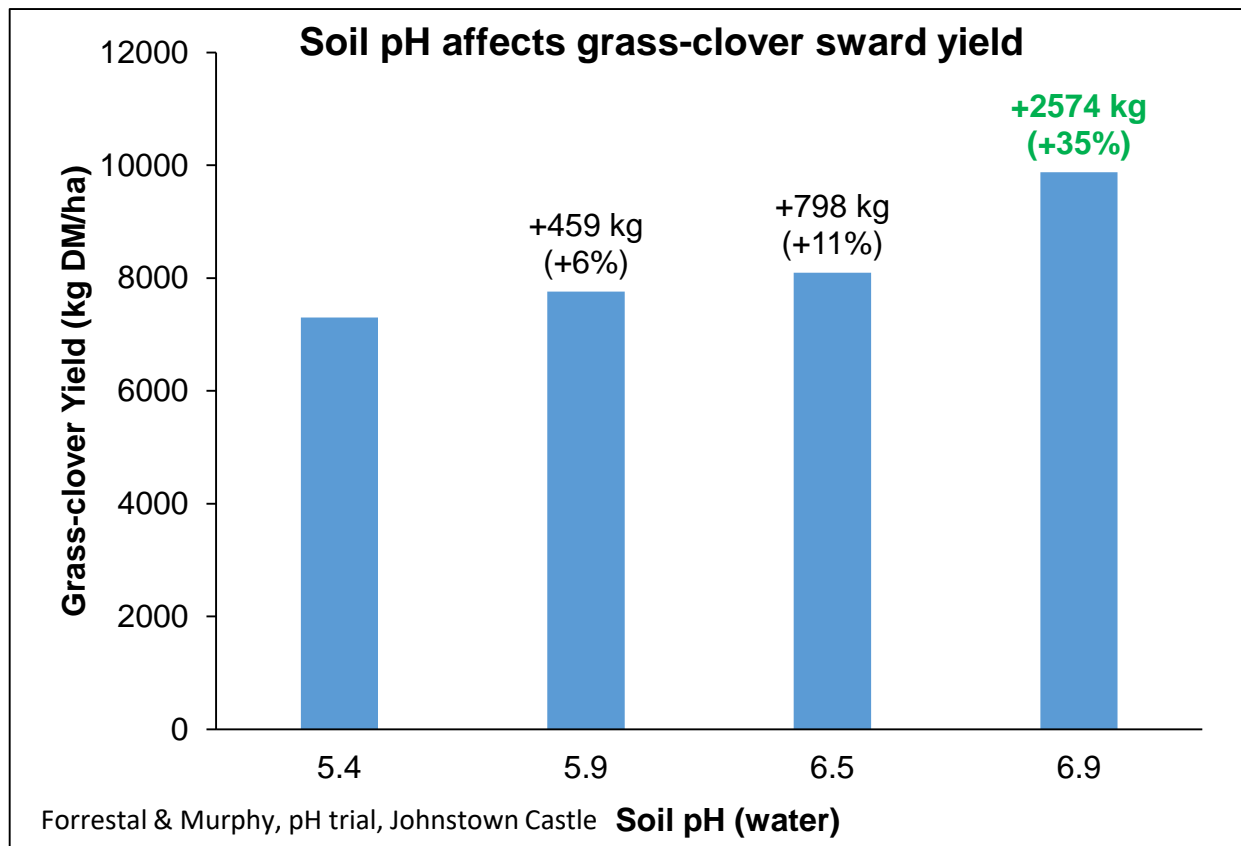
- 6 colleges
- Pig farmers
- Organic farmers

**Producing a valuable fertiliser**  
**- Important to spread with LESS**

**Already “growing” your own N!**

# “Grow” your own nitrogen – reduce need for fertiliser N

You will be well paid for clover N savings at current prices!  
e.g. reducing by 75 kg N/ha = 9700 euro on a 50 ha farm

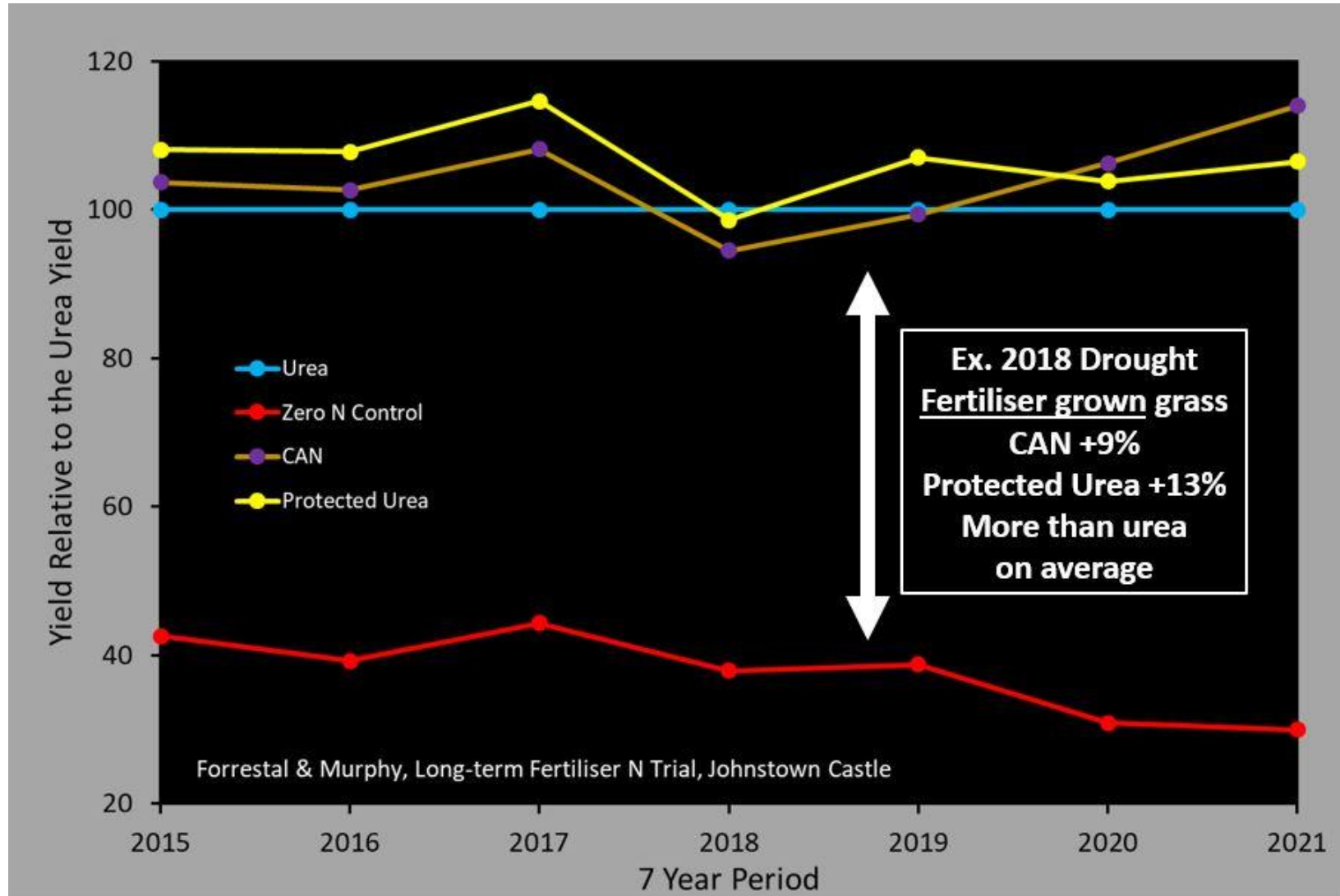


**Tip: Give existing clover boost with lime**

**Tip: Establishing clover? – lift pH first**

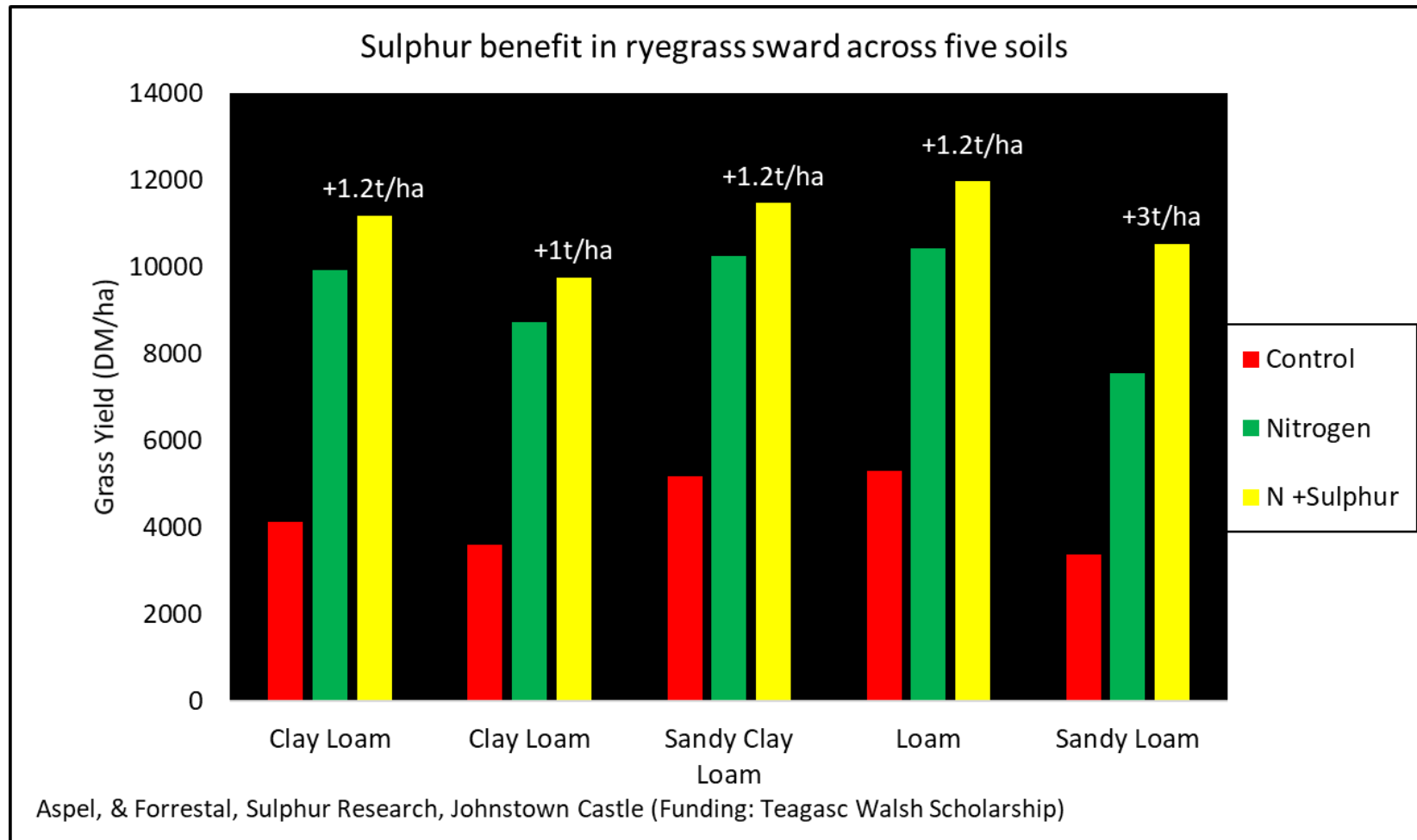


# Is there a Yield Advantage over Urea?



**Tip: In the long-term protected urea grows more**

# Tip: Don't forget Sulphur



**Tip: Slurry S only 9% available in Claire's work**

**Tip: Clover also needs S! – 30kgN/ha: AS 34, ASN 15, ProU/SulCAN 6 (kgS/ha)**

**Tip: Claire also saw reduced N leaching on sandy soils with S usage**

# Which products should I use?

Containing a urease inhibitor – EU fertiliser regulation

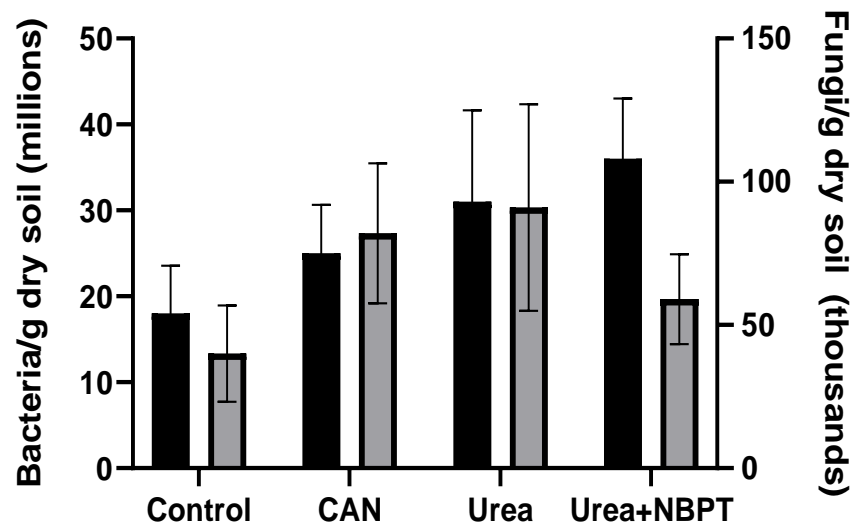
Fertiliser products available on the Irish market containing a protected form of urea (N)							
Company	Product Name	Inhibitor Type & Name	N %	P %	K %	S %	Na %
Grassland Fertilisers (Kilkenny) IFI	IFI Topper N-Sure	NBPT + NPPT (LIMUS)	46	-	-	-	-
	IFI Super Topper N-Sure	NBPT + NPPT (LIMUS)	38	-	-	7	-
	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 (Vera Range)	AMIPLUS	NBPT	46	-	-	-	-
	AMIDAS	NBPT	40	-	-	5.6	-

- 20 products
- 6 companies
- N options
- N+S options
- N+K+S options
- Supply issues?
- Order in advance

If in doubt check <https://www.teagasc.ie/crops/soil--soil-fertility/> for the most up to date list

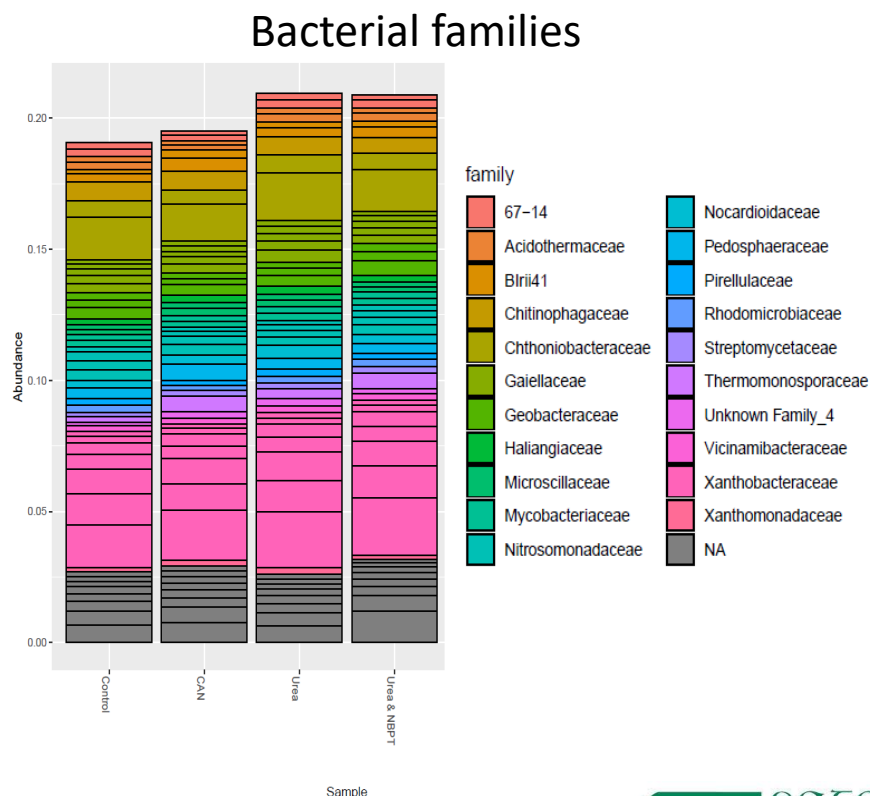


# Soil Health? Measured in long-term trial Duff, Forrestal & Brennan



No significant difference in bacterial or fungal population from fertiliser treatment

Similar bacterial diversity



# Conclusion

- Substitute protected urea for CAN and Urea on Grassland farms
- For urea (if used) in arable cropping
- You can deliver the same “effective N” to the grass with c. 12% less protected urea vs standard urea rate
- In long-term trial Protected urea delivered +13% vs urea
- Don’t forget Sulphur – Protected urea options – clover needs S too
- If in doubt about which product, consult the online list
- “Grow” more of your own N to reduce reliance on fertiliser N – LIME