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# Merchandise

## Strategic N application boosts feed

After a wet and cool winter, livestock producers are being encouraged to consider applying targeted nitrogen fertiliser to support pasture growth, helping to avoid a feed gap or boost silage or hay yields.

Pasture growth is often negligible in winter and limited in early spring, particularly across southern Australia.

This coincides with pastures being most nitrogen deficient, so strategic application in late winter to early spring can produce additional feed for spring if supported by the right conditions.

Incitec Pivot Fertilisers (IPF) technical agronomist **Clint Sheather** said strategic applications of nitrogen at key times to manage feed deficits are more efficient than a fixed rate of nitrogen.

“For many livestock producers, the economics of strategic N application

just makes sense, particularly off the back of such a wet winter. However, it’s critical producers get the most return out of their N investment by getting the right product, timing and rate of application for their pasture.

“In spring, as temperatures increase, 20 to 30% of N applied to pastures can be lost through volatilisation. Green Urea NV can reduce potential volatilisation loss by 70% and allow producers to maximise their return on N investment,” Mr Sheather said.

Green Urea NV, is granular urea, coated with the urease inhibitor NBPT (N-(n-Butyl)-thiophosphoric triamide) to protect against volatilisation losses.

Mr Sheather said trial work from 2020 showed applications of both 30 and 60 kg/ha nitrogen produced more dry matter than the control. But an early spring application of Green Urea NV, at both 30 and 60 kg/ha of nitrogen, produced significantly more dry matter than urea.

“Green Urea NV inhibits the activity of the urease enzyme, delaying the

hydrolysis process and extending the time for incorporating before rainfall for a period of up to 14 days.

“This allows more time for the fertiliser to be safely spread or incorporated into the soil by rainfall or irrigation, where it can be used by pastures without delaying dry matter production.

“When the cost per tonne of dry matter was calculated, even at \$1200 per tonne, urea and Green Urea NV are still an economic way to produce additional feed,” Mr Sheather said.

“In early spring, when the potential for nitrogen loss is greater, the additional investment in Green Urea NV of up to \$50/tonne produced more feed at a lower cost. Green Urea NV also provides additional logistical flexibility.”

An IPF Feed Cost Calculator can help producers determine the return on their nitrogen investment – which is influenced by moisture, pasture composition and density, soil fertility, grazing management, application rate and fertiliser product.

Feed MJME/kgDM	12	Cost of pasture energy c/MJME					
Urea rate kg/ha	87	Pasture DM response to 40kgN/ha					
kgN/ha	40	DM response kgDM/kgN	5	8	10	15	20
		Extra DM kg/ha	200	320	400	600	800
\$/ha							
\$52	Cost of Urea / tonne	\$600	2.17	1.36	1.09	0.72	0.54
\$87		\$1000	3.62	2.26	1.81	1.21	0.91
\$148		\$1700	6.16	3.85	3.08	2.05	1.54

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