

FIELD TESTS

GRANULAR FERT VS FOLIAR FERT: Which is better?

As a contractor spraying capital fertiliser onto his client's farms pasture using a Tow and Fert Multi 4000, Michael Smith was often asked about the benefits of foliar applied fertiliser. A number of questions from customers led him to conduct the following field tests comparing granular fertiliser application with foliar fertiliser application.

THE TEST:

Paddock 13:

The less is more test: Does applying less fertiliser in liquid form in a Tow and Fert render the same or better results than granular application?

Paddock 39:

The longevity test: Which application method gets better results over the long term?

METHOD:

1. Paddocks were selected based on the average from soil tests of the property. A 18x6 metre test area was fenced off and divided into three sections; the granular square, the control square and the Tow and Fert square.
2. Each area was mown to 1500 kg/DM/ha and fertilised in the two areas:
 - 100kg/ha of granular Urea.
 - 65kg/ha of foliar applied Urea in a Tow and Fert.
3. Once the paddock was due to be grazed a plate meter was used to measure each section (minimum 100 readings).
4. Each section then had a one square metre area mown and the clippings collected to be weighed.
5. The weight was taken and recorded.
6. Each section was then left until the next grazing when the process was repeated.

RESULTS:

Paddock 13:

After 33 days, the dry matter produced was 22% higher than that of granular Urea using 35% less fertiliser. However when you look at the grass grown per unit of Nitrogen applied (NRE) you will see the response of 332% more than granular application (NRE of 22.2 for the Tow and Fert and 6.6 for granular).

By day 90 and after the 2nd application of fertiliser, the NRE of foliar applied Nitrogen was 570% higher than that of the area fertilised by granular Urea suggesting there was residual Nitrogen in the ground from foliar applied Urea.

RESULTS:

Paddock 39:

By applying the DAP fertiliser mix in the Tow and Fert we achieved double the growth compared to granular (N Response 32.05 Granular, 64.09 Tow and Fert). The paddock was monitored for 104 days after the application of the fertiliser with three readings taken. (19th December, 29th January, 11th March).

The graphs show that as the granular fertiliser application effects dropped away to being only 10% above the control area, the Tow and Fert section was still growing on average 4-5 times more than the amount from the granular application section.



Michael Smith is a former dairy farmer, Tow and Fert contract fertiliser applicator and now Tow and Fert Manager in New Zealand.

For more of Michael's tests visit www.towandfert.co.nz or call 027 203 9774

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Paddock 13: THE LESS IS MORE TEST

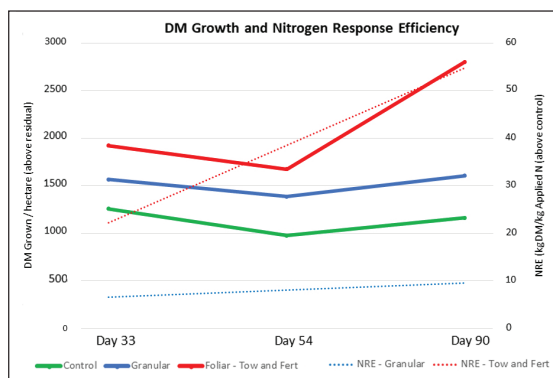
Paddock 13	Day 1	Day 33	Day 54	Day 62	Day 90
Control square	Application on 1500kg/DM/ha	DM: 1,259	DM: 975	Application on 1500kg/DM/ha	DM: 1,164
Granular square 100kg/ha of granular Urea		DM: 1,565 NRE = 6.6	DM: 1,386		DM: 1,607 NRE = 9.6
Tow and Fert square 65kg/ha of foliar Urea – Tow and Fert		DM: 1,923 NRE = 22.2	DM: 1,675		DM: 2,803 NRE = 54.8

Paddock 39: THE LONGEVITY TEST

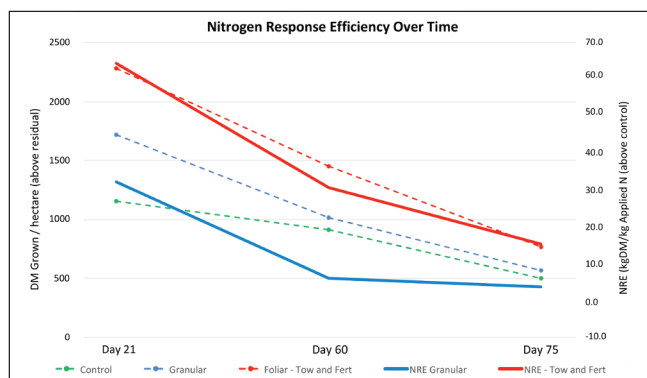
Paddock 39	Day 21	Day 60	Day 75
Control square	DM: 1156	DM: 912	DM: 501
Granular square 100kg/ha of granular Urea	DM: 1720 NRE = 32.2	DM: 1017 NRE = 6	DM: 566 NRE = 3.7
Tow and Fert square 65kg/ha of foliar Urea – Tow and Fert	DM: 2284 NRE = 64.5	DM: 1450 NRE = 30.7	DM: 769

*Graph shows kg/DM/ha grown (above residual). *NRE (Nitrogen Response Efficiency) is kgDM/kg N applied.

Paddock 13



Paddock 39



CONCLUSION:

Paddock 13: THE LESS IS MORE TEST

The results clearly show that foliar application of Urea with a Tow and Fert grows more grass, more efficiently.

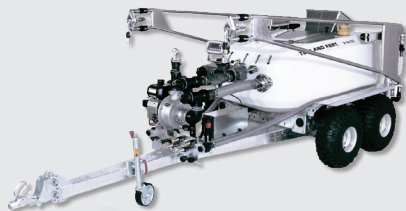
CONCLUSION:

Paddock 39: THE LONGEVITY TEST

Applying Fertiliser through a Tow and Fert will outperform granular fertiliser by 4-5 times after 100 days.

The Tow and Fert range
**LIQUID FOLIAR
SPRAY MACHINES**

THERE IS ONE FOR YOUR FARM



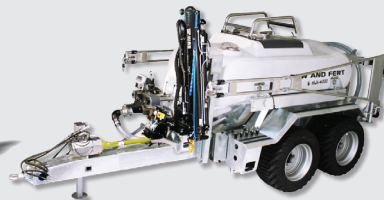
Multi 1000



Multi 1200



Multi 2800



Multi 4000