

# KREOTEC

## Trial In Pasture, Australia: Yield Increase

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### STUDY DETAILS

<b>Crop:</b>	Italian Ryegrass
<b>Country:</b>	Australia
<b>Year:</b>	2020
<b>Product(s):</b>	Kreotec
<b>Trial Type:</b>	Replicated



### STUDY AIMS

- Determine if Kreotec will provide increased yield above standard urea rates
- Determine if reduced urea rates plus Kreotec provides equivalency to higher urea only rates.

### TREATMENTS

Treatments	Control	Control + Kreotec
	20kg/ha Urea (9.2kgN/ha) 60kg/ha Urea (27.6Nkg/ha) 100kg/ha Urea (46.0kgN/ha) 200kg/ha Urea (92.0kgN/ha)	20kg/ha Urea (9.2kgN/ha) + Kreotec 60kg/ha Urea (27.6Nkg/ha) + Kreotec 100kg/ha Urea (46.0kgN/ha) + Kreotec 200kg/ha Urea (92.0kgN/ha) + Kreotec
<b>Basal Fertiliser:</b>	26.7kgP/ha 16.5kgS/ha (applied Summer 2019/20)	
<b>Kreotec Application Date:</b>	25/8/20	
<b>Application Growth Stage:</b>	Established Pasture	

## SPECIFICS

<b>Specific Location:</b>	Merrijig Vic
<b>Specific Trial Dates:</b>	August – September 2020
<b>Trial Manager:</b>	Agridome (Mathew Mahoney)
<b>Distributor:</b>	N/A
<b>Irrigation:</b>	Rainfed
<b>Previous Crop:</b>	Ryegrass and Subcover Pasture
<b>Application Method:</b>	Calibrated Knapsack Sprayer
<b>Kreotec Application Rate:</b>	200g/ha
<b>Water Rate:</b>	320L/ha
<b>Crop Variety:</b>	Amass Tetraploid Italian Ryegrass
<b>Previous Treatments</b>	<ul style="list-style-type: none"> <li>- Trial area grazed with sheep removed after 2nd grazing (6th August)</li> <li>- Trial area mown 13th August to even up the trial area</li> </ul>

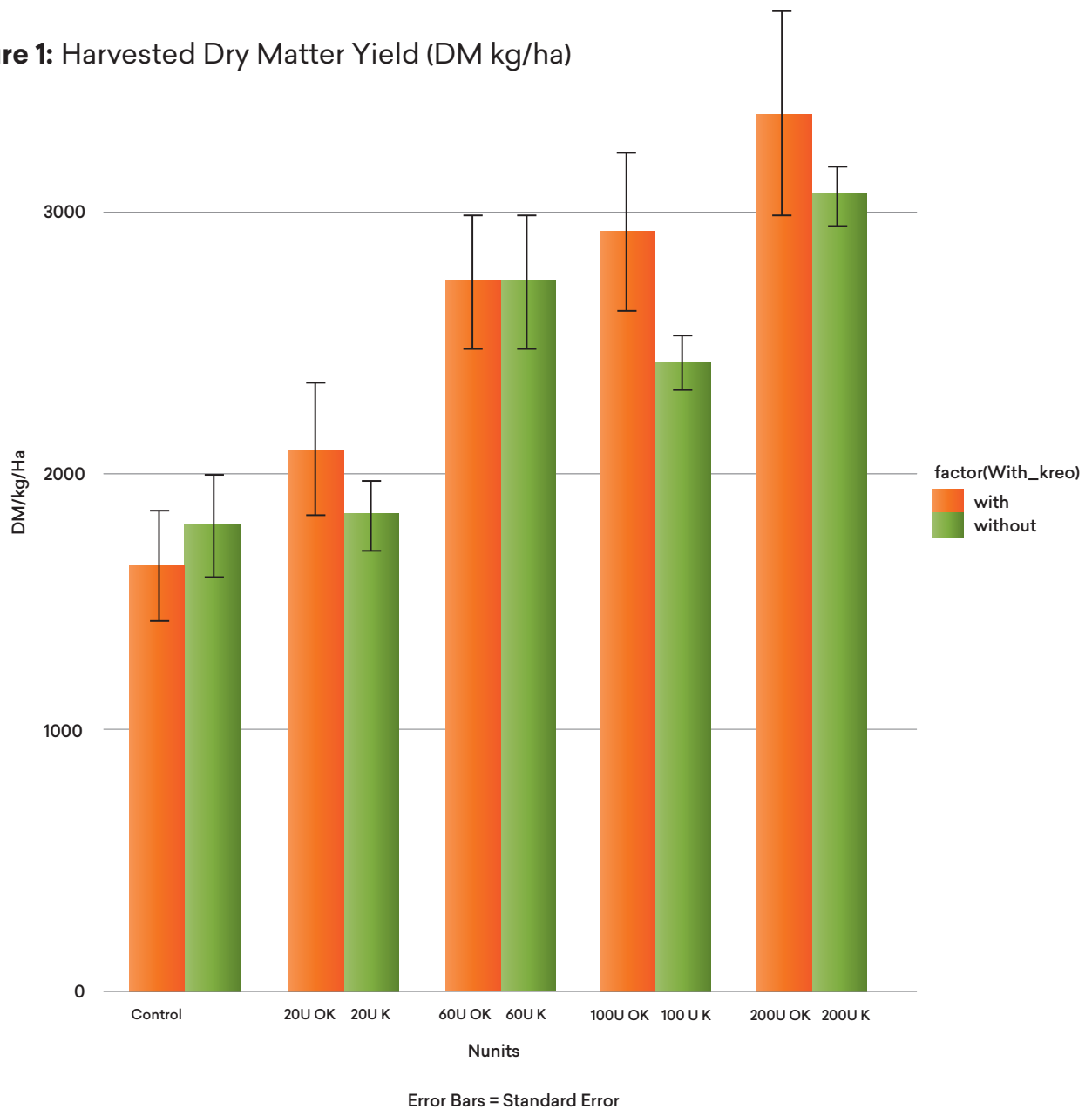
## SOIL TEST RESULTS

SOIL TYPE	BROWN CLAY LOAM
<b>Organic Carbon (W&amp;B):</b>	2.7
<b>pH (CaCl<sub>2</sub>):</b>	4.7
<b>Nitrate Nitrogen (mg/kg):</b>	7.0
<b>Ammonium Nitrogen (mg/kg):</b>	13
<b>Phosphorus Olsen (mg/kg):</b>	12
<b>Phosphorus Colwell (mg/kg):</b>	40
<b>Potassium (Colwell) (mg/kg)</b>	190
<b>Aluminium % Cations</b>	3.7
<b>Calcium % Cations</b>	74
<b>Magnesium % Cations</b>	15
<b>Sodium % Cations (ESP)</b>	1.4
<b>Potassium % Cations:</b>	6.1
<b>Calcium/Magnesium Ratio:</b>	4.9

## RESULTS

<b>Harvest Date:</b>	18th September 2020
<b>Harvest Method:</b>	Push mower (whole plot cut) with total collected material weighed. Wet weight only.

**Figure 1: Harvested Dry Matter Yield (DM kg/ha)**



## KEY FINDINGS

- General trends show that increasing urea rates generally resulted in improved yields. The addition of Kreotec showed a general trend of increased yield, particularly at higher urea application rates.
- Whilst in general the addition of Kreotec gave a yield increase over standard urea rates, the addition of Kreotec to the 100kg/ha urea treatment resulted in a statistically significant yield increase.

Additional information in relation to this trial is available by contacting Thinkbio

Thinkbio would like to acknowledge the work undertaken by Matthew Mahoney from Agridome Consultancy Pty Ltd