

BLACK UREA® VERSUS WHITE UREA.



CASE STUDY

Grower	Alex Murray
Manager	Alex Murray
Agronomist	
Location	Edgeroi, NSW
Crop	Wheat

Demonstration Purpose

The grower undertook a demonstration site to compare Black Urea to white Urea. The purpose was to test the claims of applying Black Urea at 25% less than white urea (standard practice) and still maintain yield and quality.

Demonstration Set Up

The field chosen was split into 4 areas where white urea was applied to two and Black Urea was applied to two, not side by side. The crop was a bread wheat and the products were both applied pre plant and incorporated into the soil.

The white urea was applied at 100kgs per hectare and the Black Urea at 75kg per hectare. These rates were based on soil test results and traditional practice of the farm. All other practices were kept the same throughout the growing of the crop. The crop was harvested and yield monitors were used to gauge the results of the plots.

Application Date	Product Applied	Application Rate
Pre Plant	White Urea	100 kg/ha
Pre Plant	Black Urea	75 kg/ha

Demonstration Results

The results of the demonstration showed a positive response to Black Urea. The results show a 0.4 t/ha yield increase where Black Urea was applied at the reduced rate of 25%. Figure 1 shows the total yield per hectare of both products applied.

Figure 1.

Product	Yield Per Hectare	Grade	Protein	Screenings	Yield Difference
White Urea	3.5 t/ha				0 t/Ha
Black Urea	3.9 t/ha				+0.4 t/Ha

The financial pay-off and return on investment

The financial return in using Black Urea for this grower was significant. At grade APH1 the pricing was \$307 per tonne. Not only did the Black Urea save the grower money per hectare at the reduced rate per hectare applied, it also gave an increase in yield.

Black Urea vs White Urea. The Financial Return on Investment

Grain Price	White Urea Cost Per Hectare	White Urea Net Return	Black Urea Cost Per Hectare	Black Urea Net Return	Positive/Negative Profit of Black Urea
\$307 (APH1)	\$45	\$1,029.5/ha	\$40	\$1,157.30/ha	+\$127.80/ha

Financial Scenario

Looking forward from these positive results, if the grower undertakes a full farm program of Black Urea over their 2,000 hectares they would achieve an initial saving of over **\$8,000** off their fertiliser bill. And if the above yield results were again achieved the net return to this grower across their total hectares using Black Urea at 75% the rate of white urea would be **\$254,000**

Conclusion

Black Urea in this field demonstration not only met the claims of a reduced rate per hectare to achieve the same results, it has exceeded them by achieving an increase in yield. As a result the grower received a positive increase in net return per hectare where the Black Urea was applied. The opportunity then to apply Black Urea across a greater area the financial reward for this grower would be significant.

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