

# BLACK UREA® VERSUS WHITE UREA.

## IRRIGATED COTTON CROP TRIAL NORTHERN NEW SOUTH WALES BOOSTS YIELDS

### CASE STUDY

Grower	Corish Farms
Manager	Brett Corish
Agronomist	Jim O'Connor
Location	"Tundunna" Mungindi NSW
Crop	Irrigated cotton

### Trial purpose

The grower trialled Black Urea® on an irrigated cotton crop in Northern New South Wales at Mungindi. The purpose was to quantify the costs and benefits in terms of yield and quality when compared to white Urea.

### Trial setup

The trial used three 2.4-hectare fields of irrigated cotton crop. Black Urea® and white Urea were pre-planted in rows 600 metres in length and 40 metres in width using the same ground rig. Both products were applied at the same time, and the rig is the grower's current machinery.

White Urea was applied to the soil at 410kg per hectare. This was in-line with soil test results. Black Urea® was applied at a rate of 95% (as per below table) of that rate. All other crop management decisions were kept constant.

### Application rate and timing

Application Date	Product Applied	Application Rate / Ha
Pre Plant	Black Urea®	390kg/ha
Pre Plant	White Urea	410kg/ha

### Rainfall

Aver. annual total: 550 mm  
2005 total: 450 mm  
2005 GSR: 380 mm

### Paddock History

#### Crop

2004: Cotton  
2003: Cotton  
2002: Fallow

#### Fertiliser

2004: Urea + Starter Blend  
2003: Urea + Starter Blend

### Crop Stress Events

1 Water Logging event



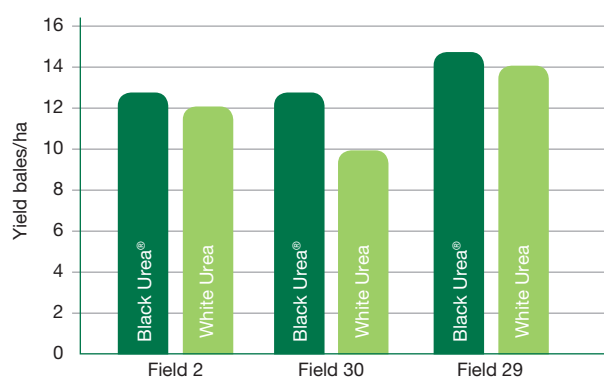
## Trial results

Black Urea® delivered significantly higher yields in each field. On average, Black Urea® was 1.12 bales per hectare more productive than white Urea. The below table and Figure 1 compare the yield from Black Urea® and white Urea for each field. Yields are given in Module weights and bales per hectare and acre (based on an average turn-out of 39%).

**Per field yield. Black Urea® versus White Urea**

Product	Field	Module weight (kg)	Bales per hectare	Bales per acre
Black Urea®	2	11,760	13.16	5.32
White Urea	2	11,460	12.83	5.19
Black Urea®	30	11,640	13.03	5.27
White Urea	30	9,480	10.61	4.29
Black Urea®	29	13,560	15.18	6.14
White Urea	29	13,020	14.57	5.90
Average Black Urea®	—	12,320	13.79	5.57
Average White Urea	—	11,320	12.67	5.12

**Figure 1: Per field yield. Black Urea® versus White Urea**



## The financial pay-off and return on investment

Financial returns from using Black Urea® are significant. At a price of \$500 per bale, even the poorest-performing field increases profit by \$143 per hectare after taking the added cost of Black Urea® into account (in this trial Black Urea® cost an extra \$22 per hectare). The best-performing field increased per hectare profit by \$1,188. On average, the grower made \$538 per hectare more by using Black Urea® instead of white Urea.

**Black Urea® vs White Urea. The financial return on investment**

	Black Urea® net return	White Urea net return	Black Urea® profit increase
Field 2	\$6,580 per hectare	\$6,415 per hectare	\$143 per hectare
Field 30	\$6,515 per hectare	\$5,305 per hectare	\$1,188 per hectare
Field 29	\$7,590 per hectare	\$7,285 per hectare	\$283 per hectare
Average	\$6,895 per hectare	\$6,335 per hectare	\$538 per hectare

Figures include Black Urea®'s \$22 per hectare added cost.

## Conclusions

Black Urea® delivers considerable cotton crop improvements in both module weight and per hectare yield. For the grower the result is a significant increase per hectare profit.



## About Advanced Nutrients

Advanced Nutrients is a leader in the development of innovative, environmentally benign fertilisers which cost less and deliver more. For the last 13 years, smart agricultural, horticultural and livestock producers throughout Australia, Africa, Asia and the Middle East have been using our products to cut input costs, boost returns and reduce farming risks.

