

# THE BEST ON EARTH

## Black Urea® Trials

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Mr G Murdoch-Brown  
Advanced Nutrients

### Reference: Laboratory Trials on “Black Urea®”

Dear Sir

The above product which, for identification purpose of this trial has been called “Black Urea™” because it is normal chemical urea coated with organic acids, hormones, vitamins and earth minerals with the intention of holding in the nitrogen content of the urea and releasing it slowly as per the plant requirements.

As nitrogen is the principal energy source for plant growth, chemical nitrogen has obvious appeal to farmers, but there are several downsides when considering sustainability. Nitrate nitrogen is the most leachable of all elements, and our polluted waterways are a testimony to this problem.

Chemical nitrogen is also the major villain in the serious depletion of organic carbon, which threatens the economic feasibility of many growing operations.

Liquid organic acids have many attributes, but the most important in this context are exceptional nitrogen storage capacity and high organic carbon levels.

For years now it has been accepted that urea while providing a high level of nitrogen for growing plants during suitable weather and soil conditions, has always proven to be unstable in high or low moisture conditions with 65% or more of the nitrogen being lost in the atmosphere or leached below the plant root depth, leaving the plants lacking available nitrogen when they most need it, which is during the grain head set and associated fill out process which governs not only production quality but also protein content of the grain.

The following trials were conducted by Agronomist Mr. J Ferguson and his staff at his soil and plant laboratory at 188 Moorina Road Moorina, Queensland.

## **Trial Method**

Ten plot trials were set up using the same type of soil as a medium.

“Black Urea<sup>TM</sup>” was placed in half the plots while normal urea taken from the same batch as that used for coating was placed in the other five plots and checked to insure that all plots contained the same nitrogen level.

Water was then added at a different related amount to stimulate a range of soil moisture contents from almost dry soil through to optimum moisture and on to very high moisture content as the governing factor in the release of nitrogen from urea appears to be the moisture content of the soil.

Nitrogen levels of the soil were checked at every two week intervals up to ten weeks. The nitrogen content of the soil at the start of the trial was regarded as 100% and reading obtained at intervals are recorded as percentage of nitrogen still remaining in the plots as compared to the original amount.

It should be noted that no plants were grown in the plots during trials, therefore the sink effect that is created by living growing plants was not taken into account.

The trial was divided into five sections to cover different moisture contents in the soil.

Trial No 1	Low Moisture
Trial No 2	Low to Medium Moisture
Trial No 3	Optimum Moisture
Trial No 4	Moderately High Moisture
Trial No 5	Very High Moisture

In conclusion on consideration of these trials along with other investigations that I have been involved in, together with available information, I am confident that this material referred to as “Black Urea<sup>TM</sup>” has a big future in farming.

Based on information to hand, I believe that this product used at 70% rate of chemical urea will not only produce better quality crops and production but will lower costs and be a lot more friendly to the environment and the farm soil.

The next step to providing the advantage of this product should be trials carried out on farm sites to see how it performs in the actual field.

Should you require any further information on these trials or classification of any point covered please telephone me at your convenience.

I hereby certify that the above trials and information were carried out by me or under my supervision and all results are correct as recorded at the time of testing.

Regards,

John Ferguson

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## “Black Urea™” and Urea Plot Trials

All readings below are % of nitrogen left in soil plots at time of testing as compared to nitrogen added to the plots at the start of testing.

### Trial No 1

#### Low Moisture

Weeks	“Black Urea™”	Urea
2	95%	55%
4	84%	30%
6	75%	15%
8	70%	3%
10	62%	1%

### Trial No 2

#### Low to Medium Moisture

Weeks	“Black Urea™”	Urea
2	93%	66%
4	85%	45%
6	70%	28%
8	63%	10%
10	52%	4%

### Trial No 3

#### Optimum Moisture

Weeks	“Black Urea™”	Urea
2	90%	75%
4	80%	42%
6	65%	26%
8	52%	8%
10	46%	5%

**Trial No 4****Moderately High Moisture**

<b>Weeks</b>	<b>“Black Urea™”</b>	<b>Urea</b>
2	90%	68%
4	76%	40%
6	65%	15%
8	50%	4%
10	45%	3%

**Trial No 5****Very High Moisture**

<b>Weeks</b>	<b>“Black Urea™”</b>	<b>Urea</b>
2	85%	60%
4	70%	35%
6	60%	10%
8	52%	2%
10	48%	1%

For more information please contact:

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