



KUNSMIS • FERTILIZER

2019

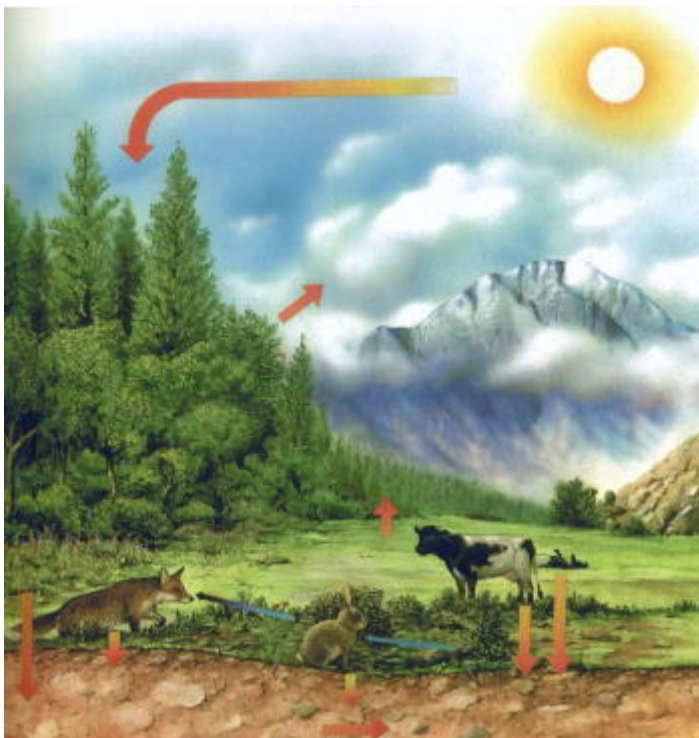
Introducing farmSPEC Coating Sensations!

Focusing on efficient fertilizers that make a difference

CARBONBLACK UREA

Without the proper functioning of the carbon cycle, every aspect of life would be changed dramatically.

It's been established that the higher the nitrogen rate applied to soil the more severe the decline of residue carbons in the soil. It is widely accepted that the carbon content of soil is a major factor in its overall health and that of the crops grown on it.



The Carbon Cycle

Soil carbon levels can be increased by adopting forms of carbon farming, including time-controlled grazing management, pasture cropping or by adding an organic carbon resource such as **CarbonBlack Urea**.



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CARBONBLACK UREA

BENEFITS USING CARBONBLACK UREA:

- **50-60% OF SOUTH AFRICAN AGRICULTURAL LAND IS CARBON DEFICIENT.**
- **CARBON IS ONE OF THE MAIN 'LIMITING FACTORS' IN CROP PRODUCTION.**
- **THIS EXPERIMENTAL WORK HAS BEEN EXTENSIVELY DOCUMENTED AND THE COST EFFICIENCY ESTABLISHED BEYOND DOUBT.**
- **NITROGEN FERTILISER HAS BEEN SHOWN TO REQUIRE MINIMUM LEVELS OF CARBONS IN THE SOIL TO BE EFFECTIVE.**
- **CARBONBLACK IS SPECIFICALLY COATED WITH LIGNOSULPHANATE (CARBO-COAT) TO ENSURE THAT GROWERS GET THE BENEFIT OF THE PRODUCT THAT THEY PAY FOR.**
- **CARBONBLACK IS MANUFACTURED WITH A UNIQUE LIGNOSULPHONATE BONDING AGENT (CARBO-COAT) WHICH IS SHOWN TO BOOST THE MICROBIAL ACTIVITY ASSOCIATED WITH NITROGEN MOBILISATION.**
- **THE BONDING AGENT (CARBO-COAT) IS AN ORGANIC PRODUCT DERIVED FROM RENEWABLE SOURCES.**

PRODUCT SPECIFICATIONS

| | |
|-------------------------------------|-----------------------------------|
| pH: | 9.1 (10% solution) |
| Bulk Density: | 700 – 800 kg/m³ |
| Specific Gravity: | 1.33 |
| Granules: | Dark Brown – 94% @ 2 – 4mm |
| Solubility (H₂O): | 1050g/l @ 20°C |
| Biuret: | <1.5% |
| Melting Point: | 133°C |



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DESCRIPTION

CARBONBLACK UREA has a proprietary organic complex that contains a unique ratio of oxidative functional groups and cofactors of biological metabolism. These include humic acid, fulvic acid, ulmic acid, amino acid, melanins, peptides, polysaccharides, vitamins and minerals. Stabilizing and binding technologies are also employed to ensure coating integrity and reaction timing.

Whilst the chemical, physical and biological properties of the enhancing coating cannot be measured in isolation it should be viewed as containing an extremely high energy formulation that bonds with the urea to form an organo-urea complex. Independent research has shown that "free radicals" contained in the coating assists in improving efficiency (via

hydrogen bonding) and forming a more stable complex than the original materials.

It is the combined effects of these, and possibly other unknown elements, that improve the overall utilization of applied nitrogen and produce more efficient rates of plant growth with less energy (fertiliser, fuel).

ANALYSIS: NITROGEN 45%

CARBON 21%



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Revolutions in nitrogen management are few and far between, urease inhibitors, nitrification inhibitors and impervious coatings have been utilised with some success but remain economically elusive for many farmers.

CARBONBLACK UREA has been developed with the help of farmers to employ a combination of chemical, biological and physical approaches to obtain greater value for money by improving nitrogen utilisation efficiency. This desirable effect further provides “down stream” value to growers and the wider community by reducing the environmental impact of plant nutrition.

APPLICATION GUIDE

CARBONBLACK UREA is specifically targeted to improve profits on low fertility soils. Application in concert with sustainable farming practices such as incorporation, split application and irrigation management will produce best results. CARBONBLACK UREA is suitable for pre-sowing, top/side dressing and application in solution with water and all other means typical to granular and soluble fertilisers.

Field trials have shown increased flexibility for growers by either:

- ***Increasing production – match existing nitrogen application rates to increase production 10-50%. Ensure all other nutrients and water are increased to meet new production demands. Particularly suited to high rainfall areas or irrigated production systems.***
- ***Reducing farm inputs – The product will reduce usual application rates by 15-35%, to obtain the same results. This is particularly suited to dryland production systems.***
- ***A combination of both strategies.***

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