



Cultivating Growth with Advanced Nano-Coating Technology: NanoCote™

Why use NanoCote Products?

NanoCote patented nanoparticle technology improves the delivery of macro and micro nutrients in dry fertilizers through a unique and flexible coating technology.

What is in NanoCote?

NanoCote products utilize multiple mechanisms to improve the overall uptake of nutrients. The core technology is built around a flexible biodegradable copolymer which disperses nutrients, and is infused with nanoparticles designed to increase plant nutrient uptake.

FAQ

Application

A simple process by which the coating is sprayed onto dry granular fertilizer while formulations are being blended.

Chemical Formulation Compatibility

The product is not stable with strong acids or bases.

Coloring/Light Weight

NanoCote products use different colors to indicate the formula being applied, but these colors appear nearly undetectable after application due to the lightweight properties of the coating.

NanoCote vs Other Polymers

NanoCote products use a highly flexible and biodegradable coating technology. This allows NanoCote products to be applied to any size or shape of fertilizer particle without the need for specialized equipment. The coating cures rapidly and does not require heat or conditions outside of normal operations to be applied. Once applied, NanoCote products dissolve rapidly and do not remain encapsulated like plastic polycarbonate-urethane coatings (PCUs) or sulfur coated urea (SCU), and other coated fertilizer technologies.

NanoCote™ Core Crop Benefits



Increases Crop Yield: NanoCote Core has been shown to increase crop yield by 10-25%. Performance will vary

based on background nutrient levels, soil pH, crop type, and other yield impacting factors.

Improves Nutrient Uptake and Efficiency: NanoCote Core is infused with mineral based nanoparticles that have the capability of forming bonds with plant nutrients, whether they are in ionic or molecular form. Nanoparticles act like a mineral sponge, keeping nutrients available longer. Due to their unique size, they can be taken up through endocytosis which is not dependent on gradient concentration or active transport.

Improves the Spread and Distribution of Nutrients in the Soil: NanoCote Core improves the distribution of nutrients in the soil, making them more available to crops in a more uniform approach. When nutrients dissolve more evenly, new crops experience less salt toxicity and better establishment. Established crops benefit from greater distribution to existing root structures.

Protects Nutrients from Environmental Losses: NanoCote Core protects nutrients from environmental losses such as runoff, leaching, and volatilization by creating a protective barrier, facilitating faster crop uptake, and acting like a mineral sponge.

Provides a 3:1 ROI - Enhanced Yield/Crop Quality: The NanoCote Core formulation provides a 3:1 ROI by increasing nutrient uptake, increasing water utilization, and providing a more uniform application of nutrients.

Cleans Out Equipment/Spreaders & Reduces Fertilizer Buildup: NanoCote Core reduces fertilizer fines building up on blending and application equipment. By doing this, maintenance costs and downtime are reduced.

Biodegradable Coating: NanoCote Core is a biodegradable coating that reduces environmental impact. This leads to a more sustainable approach to agriculture.



nanoCOTE™
advanced coating technology

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Want to see NanoCote™ Core in action?
Scan this QR Code to watch now!



Blender/Retailer Benefits of NanoCote Core

Reduces 99% of Dust in Blending/Manufacturing: NanoCote Core reduces 99% of dust in blending and manufacturing, improving working conditions and reducing worker and equipment exposure.

Reduces Fertilizer Buildup on Equipment: NanoCote Core reduces fertilizer buildup on equipment, reducing maintenance costs and increasing equipment lifespan. This also reduces downtime, which is critical during the short time frame blenders must serve the growers.

Simple and Easy to Apply Through Traditional Spray Equipment: NanoCote Core is simple and easy to apply through traditional spray equipment due to physical properties (viscosity), making it easy to integrate into existing operations.

Lower Viscosity than Leading Competitors for Easier Application: NanoCote Core has a lower viscosity than leading competitors, making it easier to apply and reducing the risk of clogged equipment.

Low and Flexible Use Rate Designed for Any Fertilizer/Granular Technology: NanoCote Core has a low and flexible use rate, making it suitable for use with any fertilizer/granular technology, including synthetics, organics, large particles, small particles, spherical, and angular. With such low inclusion rates, the guaranteed analysis for treated fertilizer will not be impacted.

Short Cure Time: NanoCote Core is designed to cure quickly on the granular fertilizer without the need for any added heat or equipment.

Biodegradable Coating: NanoCote Core is a biodegradable coating that reduces environmental impact. It is broken down via microbes that are ever present in the soil, making NanoCote a sustainable option for any size agricultural operation.