



SUREWAY
Harnessing The Power Of Nature

NUTRICAT



ENHANCE NUTRITIONAL EFFICIENCY

by promoting energy-efficient metabolic nutrition over energy-consuming ionic nutrition.

Nutricat, a product derived from humic acids, contains a blend of organic acids, enzymes, vitamins, and rare earth minerals. This formulation enhances nutritional efficacy through:

- Enhancement of cation- (CEC) and anion exchange capacity (AEC)
- Stimulation of microbiological activity to facilitate nutrient metabolism
- Preservation of nutrients in a readily bioavailable organic form
- Liberation of bound and oxidized nutrients

Nutricat is compatible with most alkaline nutrients, with the exception of Calcium.



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NUTRICAT CAN BE USED TO SIGNIFICANTLY IMPROVE YOUR NITROGEN EFFICIENCY



Nitrogen is the most commonly used fertilizer nutrient in agriculture. Studies indicate that crops utilize only about 50% of the applied Nitrogen efficiently, with the remaining amount being lost to the environment.

How can we improve and manage our applied Nitrogen efficiency?

Catalysing nitrogen applications to enhance fertilizer efficiency ensures synchronization of the nitrogen release rate with the plant's needs. This is a crucial method for effectively managing nitrogen as a "Nutrient on Demand" for crops.

This can be achieved by either coating your existing Urea with NutriCat or adding it to your fertigation mixture.

Standard Urea applications

As the Standard Urea is applied it hydrolyzes to Ammonium Carbonate. During this process, Urease producing bacteria volatilize the ammonium into ammonia gas which causes a great loss of nitrogen. Nitrobacter Bacteria convert the remaining ammonium to nitrate. Although plant available, this form of nitrogen is highly leachable. In anaerobic conditions it can convert to Nitrous Oxide which can volatilize as a gas.

Nitrate-N
is lost via
Leaching



Ammonia-N
is lost via
Volatilization



Urea + NutriCat

As the Urea hydrolyses to Ammonium (NH_4^+), the nutrient bonds to the NutriCat coating, forming a more stable form.

The nitrogen compounds are converted to amino acids and uptake is regulated by endophytes. Nitrogen becomes a nutrient on demand as opposed to a mass flow element.

Benefits:

1. A reduction in nitrogen losses as a result of volatilization and leaching.
2. Nitrogen remains in a stable form.
3. Increase in soil microbial communities further allows the storage of nutrients in a biological form.
4. The plant uses less energy as nitrogen is in a plant available form (increases plant health)



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