

# NutriCat™

## Managing your applied **Nitrogen Efficiency**

Nitrogen is agriculture's most widely used fertilizer nutrient. Various studies have shown that crops typically only use up to **50%** of the applied Nitrogen effectively, while the rest is lost through various pathways to the surrounding environment.

### How can we improve and manage our applied Nitrogen efficiency?

Catalyzing Nitrogen applications to improve fertilizer effectiveness so that the rate of nitrogen released from the fertilizer aligns with the rate the plant requires is an important way to manage Nitrogen as a **Nutrient on Demand** to the crop.

**This can be achieved by coating your existing Urea or fertigating with NutriCat.**

#### 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 very 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**  
and is lost via  
**Leaching**



**Ammonia-N**  
and is lost through  
**Volatilization.**



#### Urea + NutriCat

As the Urea hydrolyses to Ammonium ( $\text{NH}_4$ ), 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**.

#### Main 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).



**CONTACT US**



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