

# N-Fluence

Nutrition

Biostimulant



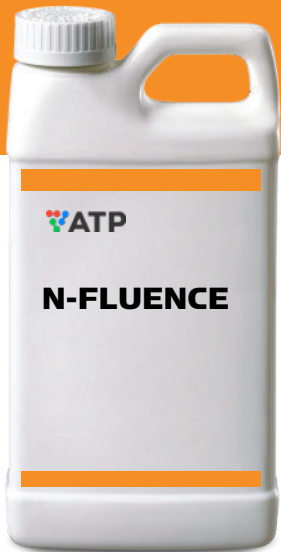
Timing:  
Foliar



Nutrient Type:  
Macronutrients



Formulation:  
Liquid



## N-Fluence is a high analysis liquid urea that utilizes the powerful biostimulant effects of Convey Technology.

- Designed as a safe, low burn form of foliar Nitrogen to be used on all crops.
- 100% readily available, enabling immediate nutrient uptake.
- Can double the uptake of other foliar applied nutrients via facilitated diffusion.
- Convey helps increase nutrient utilization by the plant.
- Nickel is added to improve N efficiency conversion and increased crop safety.



Powered by  
CONVEY Technology

## Proper Form of Nitrogen = Delivers the Genetic Potential

N-Fluence (Liquid Urea 20-0-0) is the safest and most effective form of nitrogen for foliar application. The addition of Nickel and the Convey technology supports increased nutrient uptake, efficiency and conversion into a readily available form, with limited energy required by the plant to do so.

- Urea is readily converted to plant available amine once inside the leaf and is exposed to the urease enzyme that the plant naturally makes. This reduces the potential for burn and crop injury (Figure 1)
  - In contrast, UAN (28-0-0) has 50% of the nitrogen in a form (ammonium and nitrate) that is readily taken up by the plant.
- However, once inside, water is required to convert it into a plant available form. The caused localized "dehydration" of the leave - also known as "UAN burn" (Figure 1)
- Proper nickel nutrition increased the urease enzyme activity to reduce burn and increase nitrogen conversion (Figure 2).

**Figure 1 - Foliar UAN compared to liquid Urea**



UAN (28-0-0) burn on Wheat applied at 120# N/ac  
Urea (20-0-0) reduced burn on wheat (applied at 120# N/ac)

**Figure 2: Value of Proper Nickel Nutrition**

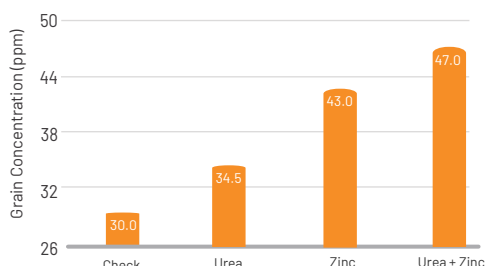


Effect of Ni supply on reducing urea toxicity

## Proven Agronomic Performance

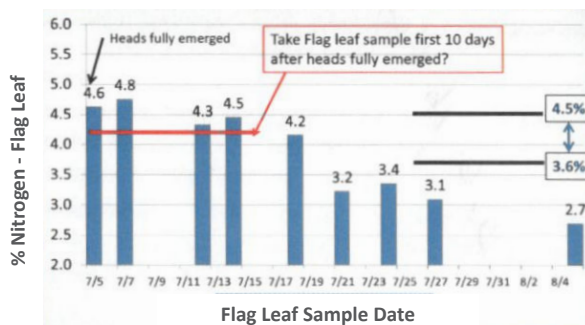
- Trials conducted by both Michigan State University and Sabanci University (Figure 1) showed the addition of urea increased the uptake of other nutrients up to 200%.
- The critical N level in the flag leaf of wheat is 4.2% at head emergence to obtain 14% protein. However, the critical N level in the plant changes as the crop matures. If the tissue sample is below these threshold levels, a foliar N application becomes more significant as the plant becomes more N deficient. (Figure 2)

**Figure 1: Increased Nutrient Uptake**

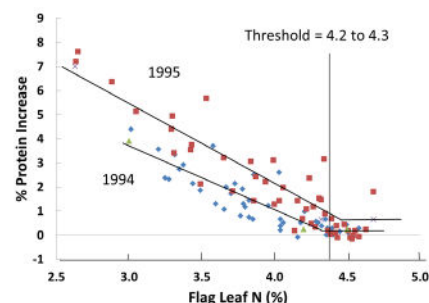


Source: Harvest Zinc Program  
Urea applied at 10L/ac.  
Zinc applied at 2 L/ac.  
All products applied at BBCH73 (milk).  
Water volumed 10 gal/ac.

**Figure 2: Critical N Levels in Wheat**



**Figure 3: Impact of Foliar N Application on Protein Content**



Source: University of Manitoba, 1995



**The addition of 7-8 lb of Nitrogen at Milk Stage can increase the protein content by 1.0%.**

## Product Recommendations

- It is recommended to do a minimum of a 2:1 dilution ratio of water to N-Fluence.
- For lower rates of N-Fluence, ensure a minimum water volume of 10 gal/ac is used for optimum coverage and uptake.
- N-Fluence can be combined with the NRG, ReLeaf, 42Phi or Kinetic lines of products, if it is determined that additional nutrients are required.
- N-Fluence can be applied throughout the entire growing season.
- When addressing protein management in wheat, the optimum timing is the milk stage.
- N-Fluence can be combined with a crop protection product. Please conduct a jar test and refer to ATP's information on product compatibility at [www.atpag.com/compatibility](http://www.atpag.com/compatibility)
- To view the N-Fluence SDS and product label, please visit [www.atpag.com](http://www.atpag.com)

Product	Analysis	Rate	Timing	Form
N-Fluence	20-0-0 + Convey	5-15 L/ac	Foliar	Liquid



At ATP, we believe a proactive, science-based approach to restore the balance between plant and soil health is the single most effective way to deliver the genetic potential of the crop. We challenge the status quo by utilizing agtech to monitor and drive productivity.

[info@atpag.com](mailto:info@atpag.com) | 1.877.538.5511 | [www.atpag.com](http://www.atpag.com)