



ION_{fx}™



For Use On: Corn, Sorghum, Small Grains (Foliar), Cotton, Canola and Flax

ION_{fx}™ is a mix of genetically identified and patented bacteria, along with archaea and fungi. While many microbes live naturally in a plant, this mix of microorganisms has been selected to support, enhance, or supplement plant functions. ION_{fx} unlocks a plant's ability to produce growth regulators and metabolites.

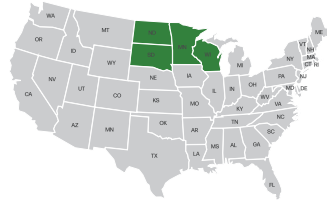
2021 ION_{fx} GRAIN SUMMARY

Testing was conducted in 13 locations across four states with 19 comparisons of ION_{fx} treated products vs. untreated (control).

Results showed the following:

74%
WIN RATE

8.4
BU/ACRE RESPONSE
WHEAT RESPONSE



BENEFITS

Improved Emergence

- Phosphate solubilization through microbial activity helps support enhanced seed germination.
- Cold and wet soils release phosphorus very slowly which can delay plant growth.

Improved Early Vigor

- Slow acting, continuous action microbes facilitate micronutrient availability within the plant.
- Increased Phosphorus uptake.
- Enhanced root system allowing for more efficient nutrient & water uptake.

Enhanced Root Development

- Slow acting, continuous action microbes facilitate micronutrient availability within the plant.
- Release of hormones such as IAA help promote increased root development.

Improved Heat Tolerance

APPLICATION RATES

- **Seed:** 2 ounces per CWT seeds via seed treater. Can be co-applied with other products.
- **In Furrow:** 16 fl. oz. per acre and minimum of 5 gpa rate.
- **Foliar:** 16 fl. oz. per acre with 10 to 20 gallons water. May be tank mixed with other products. For corn or sorghum, V3-V7 would be ideal application stage.
- **Guaranteed Analysis**
- **Non-plant Food**
Pseudomonas fluorescense 1.0 x 10⁵ CFU/ml
- Microorganisms exempt from CFR requirements 40 CFR 725
- **Packaging:** 4x100 oz. jugs (seed applied), 2x2.5 gallon jugs (in furrow and foliar), 275 gallon bulk shuttles (in furrow and foliar)



ION_{fx} Silage Summary

In 2021, silage testing was conducted in 7 locations across South Dakota, North Dakota, Nebraska and Wisconsin. 22 comparisons of ION_{fx} responsiveness in 7 silage products vs. untreated (control).

Results showed the following:

7 Locations	Tons Per Acre at 65%	Milk per Acre (lbs)	Beef per Acre (lbs)
Untreated Corn	27.4	29,747	2,184
ION _{fx}	29.8	32,626	2,387
22 Comparisons Avg. Difference Treated vs. Untreated		2,879	203



Southwest WI