

Application and Use Recommendations

Corn

Region	N-Loss Potential	Recommended Use
Semi-arid Great Plains	Low	Spring: Preferred Fall: Acceptable
Humid US Corn Belt North of Interstate 80	High	Spring: Preferred Fall: Acceptable
Humid US Corn Belt South of Interstate 80	High	Spring: Preferred Fall: Not recommended
US Atlantic Coast & New England	Very High	Split applications or side-dress: Preferred Spring pre-plant: Acceptable Fall: Not recommended



A **SMARTER** SOURCE OF NITROGEN. A **SMARTER** WAY TO GROW.*

For more information about ESN technology visit SmartNitrogen.com or call **1-888-757-0072**. To contact the field representative in your area go to <http://www.smartnitrogen.com/contact-us.aspx>



Agrium Advanced Technologies (AAT) is a strategic business unit of Agrium Inc. AAT produces and markets controlled-release nutrients, micronutrients and plant protection products for sale to the agricultural, professional turf and ornamental markets primarily in North America.

©2011 Agrium Advanced Technologies.
ESN; ESN SMART NITROGEN; SMARTER WAYS TO GROW; A SMARTER SOURCE OF NITROGEN. A SMARTER WAY TO GROW.; and AGRIVIUM ADVANCED TECHNOLOGIES and Designs are all trademarks owned by Agrium Inc.
These statements and recommendations are based on results from independent university research. Actual results may vary.

06/11-13800-08



These are general use recommendations based on optimal growing conditions. Knowledge of local conditions and grower goals should be considered to modify or blend to achieve best results.

- ▶ **Since the most rapid uptake of N in corn – 60-80% of total N needs – is mid-season, ESN is recommended as a one-source, pre-plant application for season-long feeding. Best results are expected if ESN is applied within a couple weeks of planting.**
- ▶ **ESN can provide exceptional benefits for earlier applications where conventional fertilizers are at risk of loss from volatilization or excess moisture.**
 - Faster to apply than ammonia or solution
 - Will not burn crop like urea or ammonium nitrate
 - Lowers N loss to leaching and denitrification and eliminates volatilization
 - For conditions of greater N loss, increase the amount of ESN in the blend
 - More soluble, immediately available N may be used where needed or desired

Application Recommendations

- ▶ Incorporation is preferred where possible, especially in drier areas of unreliable rainfall
- ▶ Surface application is acceptable if there is sufficient residue to prevent physical movement
- ▶ ESN may be applied as a top-dress after planting or emergence. We recommend this application be made by about the V6 growth stage. If ESN is to be applied as late as V6, a small amount of N before or at planting, such as a starter or sufficient residual available soil N, is recommended to prevent early N deficiency
- ▶ Ensure proper calibration of equipment for even coverage

Northern Geographies (North of I-80)

- ▶ The preferred application timing is the period from a couple weeks before planting until the V4 growth stage
- ▶ Broadcast is acceptable with adequate moisture levels and where surface movement is minimal
- ▶ Incorporation recommended where possible and where crop residues are sufficient to prevent surface movement of ESN. Surface application is not recommended on bare soil
- ▶ ESN recommended at 50-90% of crop N requirements
- ▶ May be applied in the fall in geographies where soils freeze and stay frozen throughout the winter
- ▶ Fall applications should be incorporated

Southern Geographies (South of I-80)

- ▶ Preferred application timing is in the period from a couple weeks before planting to the V6 growth
- ▶ Broadcast is acceptable with acceptable moisture levels and surface movement is minimal
- ▶ Incorporation recommended where possible and where crop residues are sufficient to prevent surface movement of ESN. Surface applications are not recommended on bare soil
- ▶ ESN recommended at 70-90% of crop N requirements
- ▶ Fall ESN applications are not recommended in this region



ESN is the only controlled-release nitrogen designed for agriculture that delivers a significant return on investment through increased nitrogen efficiency.

