AGROTAIN Technical Research Summary

North Central Kansas Field Irrigation Research - 2004

Research from Kansas State University Agronomy in 2004 investigated various nitrogen (N) sources and timing of application for irrigated corn production in north central Kansas. The research found:

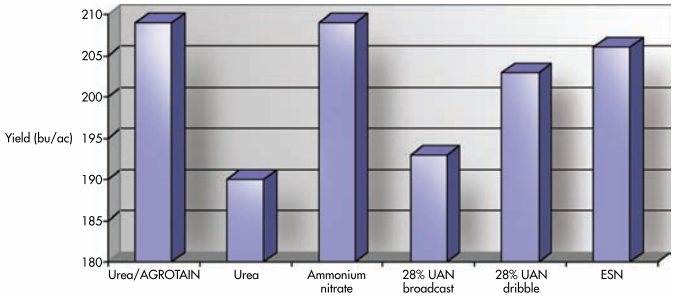
- **applying urea-treated AGROTAIN to no-till corn resulted in the highest yield of all treatments.**

Research protocol

The experiment compares split applications at 160 lb/ac N for urea, urea/AGROTAIN, ammonium nitrate, ESN (controlled-release, polymer-coated urea), and UAN broadcast or banded.

- Conducted on a farmer's field on a Muir silt loam soil in Republican River Valley
- Soil pH of 7.1
- Organic matter content of 2.1%
- Bray-1 P was 69 ppm
- Exchangeable K was 469 ppm
- DEKALB C60-19 planted without tillage into corn stubble
- Furrow irrigation
- Split applications consisted of 1/2 of N applied immediately after planting on the surface, and 1/2 applied at the V4 stage
- Preplant applications were all broadcast
- V4 treatments were banded

Effects of N source on corn grain yield with 80 + 80 lb split applied N/ac; Scandia, Kansas, 2004



Source: Kansas State University Agronomy Field Research, Irrigation and North Central Kansas Experimental Field.

Key findings

- AGROTAIN-treated urea delivered the highest corn yields in no-till, irrigated corn.
- AGROTAIN-treated urea corn yields were equal to ammonium nitrate yields, indicating reduced volatilization losses similar to ammonium nitrate.
- Controlled-release nitrogen fertilizer yields were slightly lower than AGROTAIN-treated urea.
- UAN broadcast or dribble banded did not produce yields as high as AGROTAIN-treated urea.
- AGROTAIN-treated urea can improve N use efficiency, compared with urea and UAN when surface applied in no-till conditions.

RESEARCH INSTITUTE: Kansas State University Agronomy
RESEARCHER NAME: W.B. Gordon

AGROTAIN® INTERNATIONAL, L.L.C.
One Angelica Street
St. Louis, Missouri 63147
Phone: (314) 241-9531
Fax: (314) 241-1819
Toll free: 1-888-425-8732
www.agrotain.com

®AGROTAIN is a registered trademark licensed exclusively to Agrotain International L.L.C.