

Facts From the Field

ESN[®] Is the Smart Nitrogen For Montana Winter Wheat

ESN can be an effective tool for nitrogen (N) management in no-till winter wheat in the northern Great Plains. This Montana State University study demonstrated that ESN, broadcast either in fall or spring, can outperform conventional urea. ESN, urea and different blends of ESN and urea were broadcast either in the fall at seeding (late Sept.-early Oct.) or in the spring at “green-up” (early April).

Optimum ESN blends in both fall and spring produced greater yields than urea applied at the same time.

- A blend comprised of 75% ESN produced the greatest yields with fall application. For spring application, 50% ESN blend performed best, indicating a greater need for immediately available N in spring.
- The greatest yield differences were observed in 2013. In 2013, fall application of a 75% ESN blend out-yielded fall urea by almost 7 bu./ac. and spring application of the 50% ESN blend out-yielded spring urea by 8 bu./ac.
- Low yields with spring broadcast urea, particularly spring of 2013, indicate potential ammonia volatilization losses from this treatment.
- Based on average yield differences between best ESN treatment and urea, appropriate ESN blends for the time of application increase grower net return by about \$12/ac. for the fall-applied 75% blend and about \$16/ac. for the spring-applied 50% ESN blend.



ESN SMART NITROGEN

- Enhances nitrogen use efficiency
- Improves crop yield and quality
- Provides convenience through ease of use
- Environmentally responsible



HOW CAN WE HELP?

To make ESN a part of your nitrogen management program, contact an authorized retailer or ESN representative.

FOR MORE INFORMATION:

www.SmartNitrogen.com

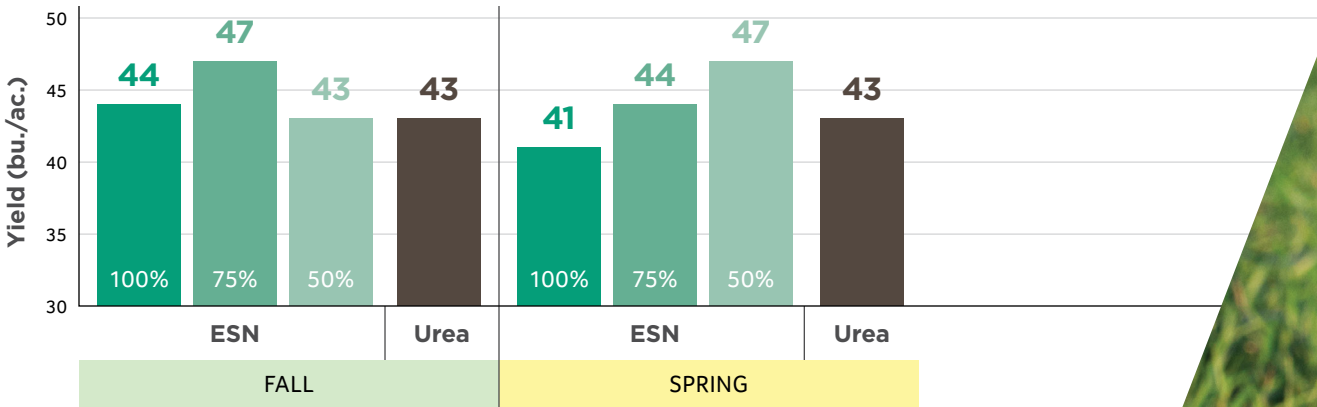
ESN REPRESENTATIVE:



Learn more about the industry's leading environmentally smart nitrogen at www.SmartNitrogen.com

Nutrien

Montana No-Till Winter Wheat Yield



Percentage of Total Applied N as ESN and Time of N Application

- Yields are means of two years (2011-12 and 2012-13 cropping seasons)
- Nitrogen rate of 82 lb N/ac. is MSU recommended rate as determined by yield goal of 40 bu./ac. and estimated N mineralization of 30 lb N/ac.
- Net return calculation is based on 4 bu./ac. yield difference, wheat price of \$6/bu. and ESN-Urea price difference of \$0.20/lb N

Source: Montana State University at Moccasin, MT



Learn more about the industry's leading environmentally smart nitrogen at www.SmartNitrogen.com