Facts From the Field
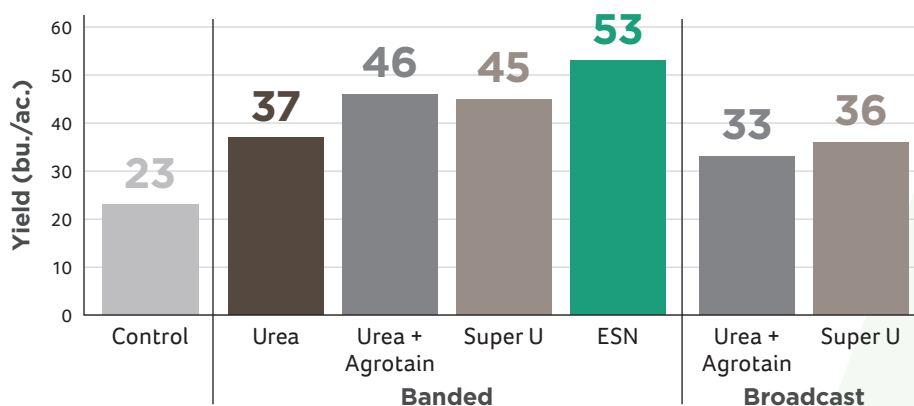
ESN® Increases Productivity Under Moisture Stress

Canola and cereal grains are often grown in semi-arid areas of limited rainfall with significant moisture stress. It has been demonstrated in previous studies that under limited moisture, excess nitrogen (N) supply during vegetative growth can decrease yields by consuming soil moisture and leaving less moisture for grain production.

This Canadian canola study demonstrated a significant ESN advantage in severe drought by controlling N supply and early vegetative growth. Urea combined with urease and nitrification inhibitors did not provide the same advantage because they do not regulate N supply to the crop.

- ESN produced consistently high yields under moisture stress, sometimes severe stress, for all three site-years averaging 16 bu./ac. more than urea and 7-8 bu./ac. more than urea with Agrotain or Super U.
- The greater the moisture stress, the greater the benefit of ESN. In 2015, a "50-year drought," ESN outyielded urea by 37 bu./ac.
- Broadcast treatments of urea with Agrotain and Super U performed poorly relative to all banded treatments.

Northern Alberta Three Site-Year Average

Bar chart — Yield (bu./ac.):
Banded: Control 23, Urea 37, Urea + Agrotain 46, Super U 45, ESN 53.
Broadcast: Urea + Agrotain 33, Super U 36.

- N rate was 60 lb N/ac.
- Banded treatments were applied at planting in a band three inches from the seedrow and four inches deep
- Broadcast treatments were broadcast just before planting
- Site-years were planted May 2014, July 2014 and May 2015 at Fort Vermillion, AB

Source: Mackenzie Applied Research Assoc.

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

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