

Technical Information Sheet

Maximise yield and minimise loss with an enhanced nitrogen stabiliser.

Key Features

- Optimises yield potential of crops fertilised with ammonium containing fertilisers (such as slurry, digestate, UAN, AN, urea, etc).
- Keeps more ammonium in soil for longer.
- Reduces nitrogen escape into the environment.
- Regulates nitrate availability to crops.
- Compatible with a range of crop inputs such as herbicides, fungicides, liquid fertilisers.
- Only one rate, regardless of when applied.
- Usually applied with a crop sprayer.
- May be applied with slurry
- Must be incorporated within 10 days by either 12 mm of rain or mechanical incorporation.

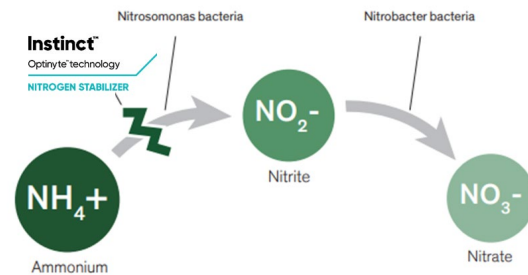
Key facts

Active Ingredient:	300 g/litre nitrapyrin
Pack Size:	10 Litres
Formulation:	CS Capsule Solution (Microencapsulation)
Recommended Dose:	1.7 litres/ha
Maximum Dose:	Do not apply more than a total of 3.4 L of Instinct per hectare per year. (125 days must elapse between applications)
Application Timing:	Can be applied spring and autumn. Flexible – pre and post planting, best applied as close to main fertiliser application.
Water Volumes:	100–200 litres water/ha
Spray Quality:	MEDIUM as defined by BCPC
Nozzles:	All conventional nozzles

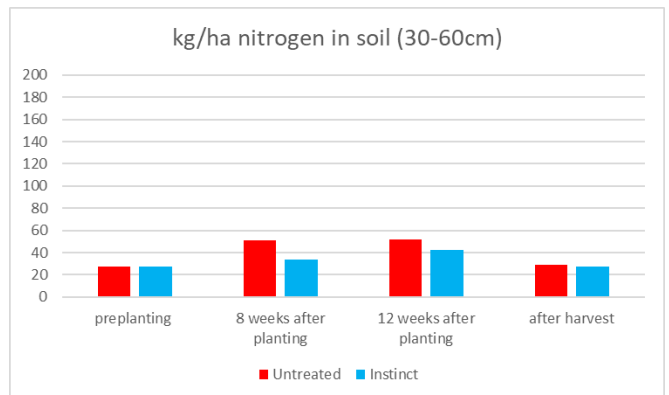
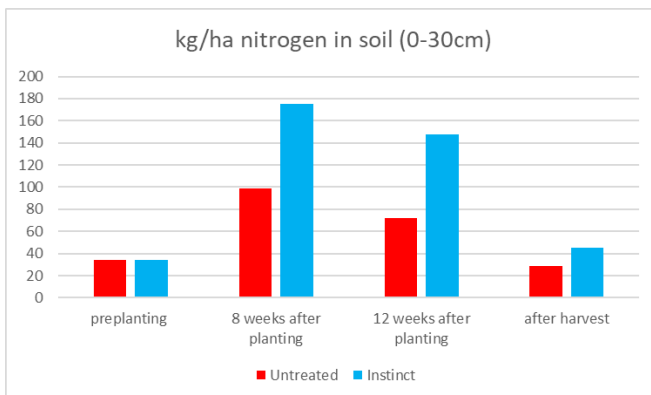
Mode of action

How Optinyte technology works

Products containing Optinyte technology, such as Instinct® and N-Lock™, work by stabilising ammonium (NH₄⁺). They slow down the process that converts ammonium to nitrite. This process can be slowed down for 10–12 weeks. This keeps more ammonium in the soil, for longer. Ammonium is not vulnerable to leaching from soil with rainfall, nor will it be converted to nitrous oxide in waterlogged soils. As more nitrogen is retained in the soil for longer, the yield potential of a crop is optimised, and environmental footprint reduced.

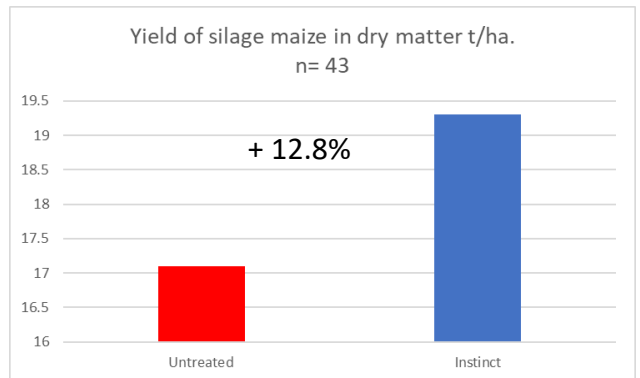
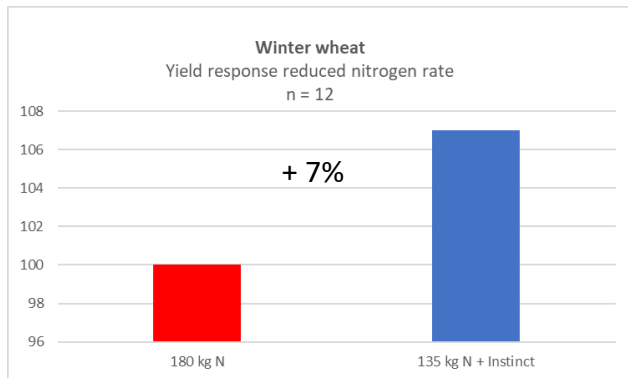
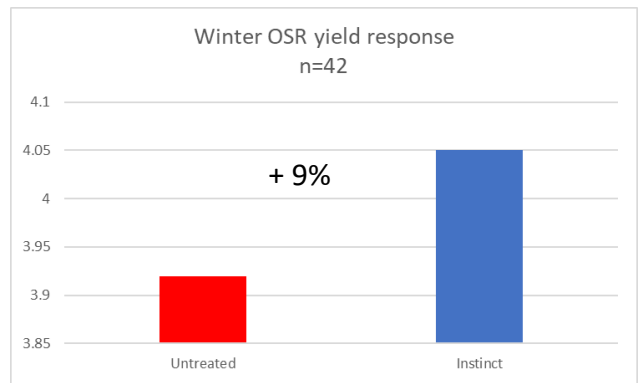


The results of a trial in maize demonstrates how Instinct keeps more nitrogen in the soil for longer. Instinct retains more nitrogen in the upper layers of soil for longer, where it is more accessible to a developing crop.



Instinct provides yield optimisation and nitrogen management flexibility :

- Keep the nitrogen rate the same and push for yield.
- Reduce the nitrogen rate and maintain yield.
- Reduce the number of applications and save on cost and reinvest the time elsewhere.



Benefits

When using Instinct®, farmers and the environment will benefit from:

- At least 8 more weeks of nitrogen availability in the soil.
- 50% less greenhouse gas emissions.
- 45% less nitrogen leaching.
- 28% greater nitrogen-in soil-retention.
- Optimised nitrogen use.



PROTECT THE ENVIRONMENT

Reduce nitrate and GHG losses



GREATER PRODUCTIVITY

Maximise yield



IMPROVED EFFICIENCY

Keep nitrogen in the root zone

Best use advice

- Best results seen when used on light soils prone to leaching, and heavy soils prone to water-logging.
- Can be applied before, or with, or after a fertiliser application.
- Optimal performance is when Instinct is applied early in the season, within a few days of the main fertiliser applications.
- In cool conditions bacterial inhibition may last 10-12 weeks, in warm soils 8-10 weeks.
- **If not applied to soil and incorporated, but as a foliar application, there must be 12mm of precipitation within 10 days of the Instinct application.**
- Instinct is compatible with a wide variety of plant protection products.

Application with fertilisers

Instinct can be applied with all nitrogen fertilisers containing ammonium, such as

- Slurry
- Biogas digestate
- UAN (such as 28%, 30% or 32%)
- Urea
- Ammonium nitrate
- Calcium ammonium nitrate