

Improved nitrogen management.



Instinct®

Optinyte™ technology

NITROGEN STABILISER

Improve crop performance and sustainability through better nitrogen management.

Reducing losses of nitrogen to the environment is one approach to improve nitrogen use efficiency.

Instinct, containing Optinyte™ technology, reduces environmental loss by slowing the nitrification process.

A bit about Instinct:

- Instinct is a nitrification inhibitor.
- Instinct inhibits the enzymatic process in the *Nitrosomonas bacteria* for a period of 10-12 weeks.

As a result:

- More ammonium retained in the soil.
- Less nitrate lost to leaching.
- Less Nox gas emissions (denitrification losses).
- **There is more nitrogen in the soil for longer.**



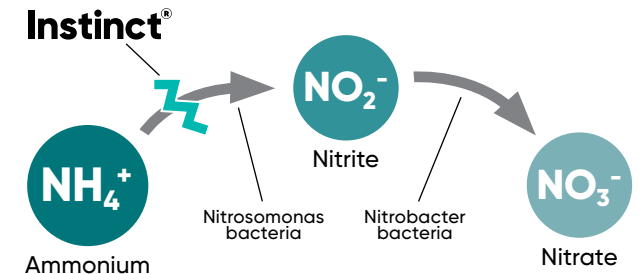
How Instinct works

Instinct works by stabilising ammonium (NH_4^+). It inhibits the *Nitrosomonas bacteria*, slowing down the conversion of ammonium to nitrite. This keeps more ammonium in the soil, for longer.

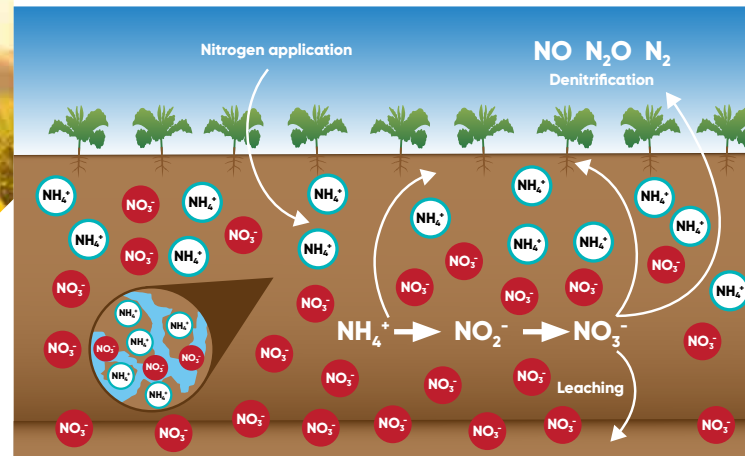
Ammonium is not vulnerable to leaching from soil with rainfall, nor will it be converted to nitrous oxide in waterlogged soils.

As more nitrogen is retained in the soil for longer, the yield potential of a crop is optimised, and environmental footprint reduced.

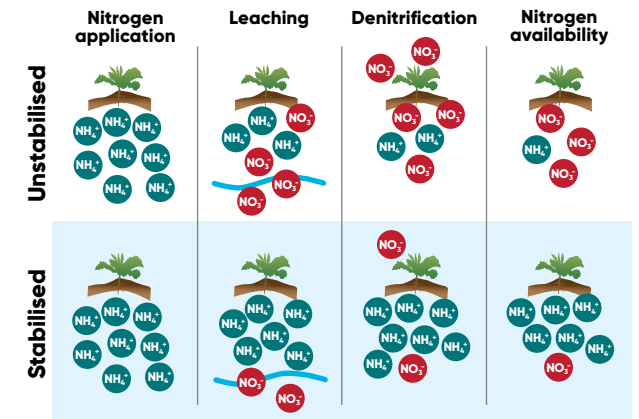
This process can be slowed down for 10-12 weeks.



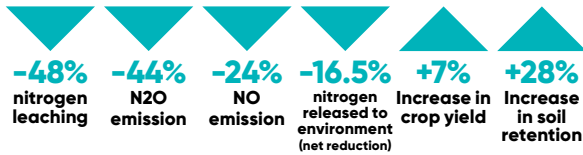
Stabilising nitrogen with Instinct greatly reduces both leaching and denitrification by protecting nitrogen in the root zone.



What happens to unstabilised nitrogen?



Benefits of Instinct



ENVIRONMENTAL BENEFITS

- Stabilised nitrogen reduces leaching or loss from denitrification
- Less nitrate loss into waterways
- Reduces greenhouse gas emissions (GHG) into the atmosphere

CROP BENEFITS

- Nitrogen remains available in the root zone longer for crop uptake
- Increased yield in maize, cereals and many other crops
- Improves crop quality and plant health

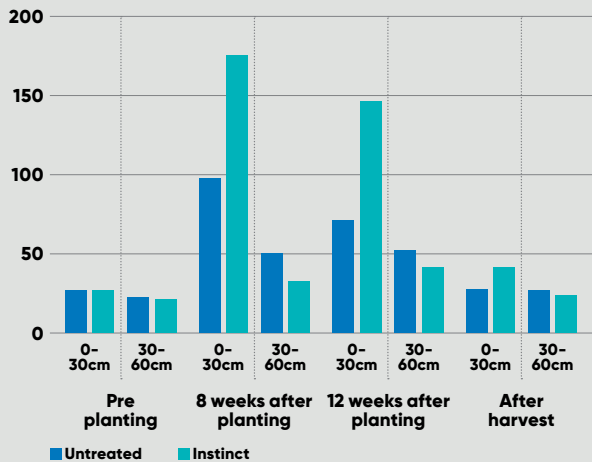
PROTECT THE ENVIRONMENT
Reduce nitrate and GHG losses

GREATER PRODUCTIVITY
Maximise yield

IMPROVED EFFICIENCY
Keep nitrogen in the root zone

The table below demonstrates how Instinct retains more nitrogen in the upper layers of soil over time, which becomes available to the developing crop.

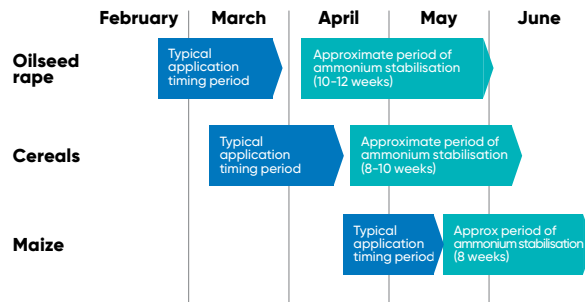
Kg/Ha nitrogen in the soil



Instinct can be used on:



Typical periods of spring use

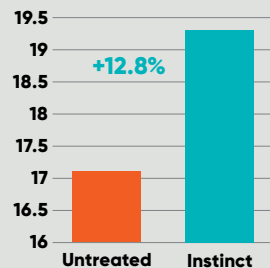


Instinct can also be used in autumn. For more information visit: www.corteva.co.uk/instinct

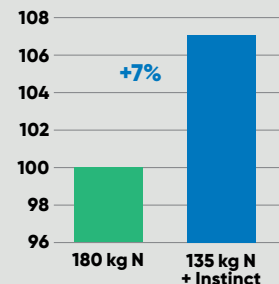
Instinct provides yield optimisation and nitrogen management flexibility :

- 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.

Yield of silage in dry matter t/ha. n=43



Winter wheat yield response reduced nitrogen rate n=12



Key points:

Contains	Nitrapyrin 300g/l
Technology	Optinyte technology
Formulation	Microencapsulated (CS)
Rate	1.7 L/ha
Source of nitrogen	Any form of ammonium containing fertiliser, such as slurry, AD digestate, manure, urea, UAN, AN.
Maximum total 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.
Application methods	Instinct can be applied in a number of ways: <ul style="list-style-type: none"> With slurry/digestate With UAN With glyphosate With pre-em herbicides With post-em herbicides Requires incorporation with soil – either mechanically or precipitation (12mm rain) within 10 days after Instinct application.

For more information about Instinct visit www.corteva.co.uk/instinct, or call the Technical Hotline: 0800 689 8899, email: ukhotline@corteva.com, or visit: www.corteva.co.uk



Use plant protection products safely. Always read the label and product information before use. For further information including warning phrases and symbols refer to label. Triple rinse containers, puncture and invert to dry at time of use.

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