

Slurry and digestate nitrogen losses

Significant amounts of nitrogen are lost during and after the spreading of slurry and digestate.

The nitrogen can be lost to the atmosphere as ammonia and nitrous oxide, or through nitrate leaching.

Losses are dependent on environmental conditions post application, such as soil moisture content, rainfall and temperature.

Introducing Vizura®

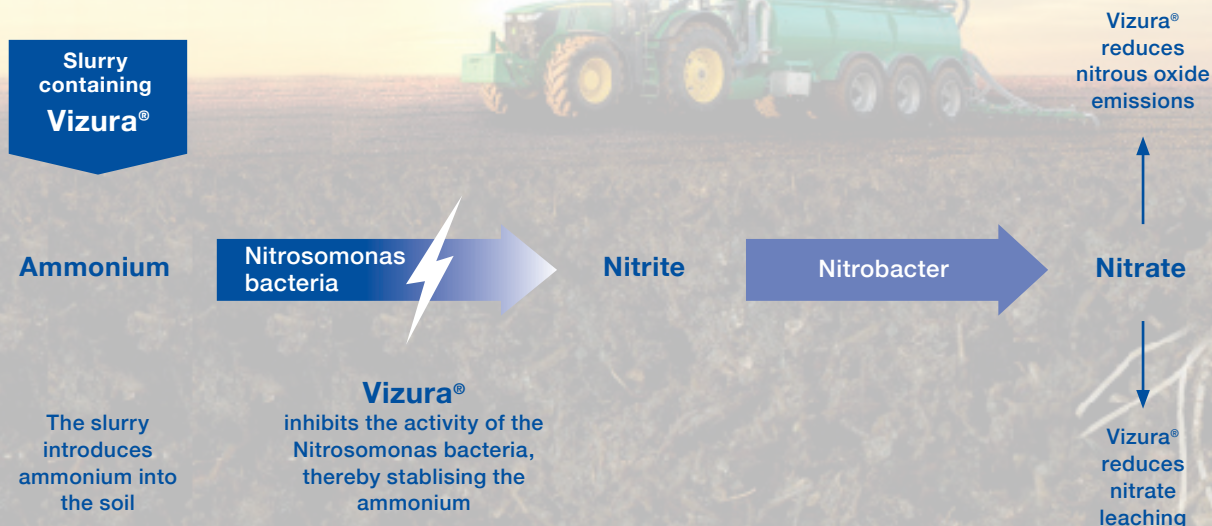
Vizura® is a nitrification inhibitor for use with slurry and digestate. Vizura® keeps nitrogen in the ammonium form for longer, reducing losses and optimising plant nutrition.

Improves nitrogen use efficiency

Increases yield

Reduces nitrogen losses

How Vizura® works



Nitrosomonas bacteria convert the ammonium from slurry and digestate into nitrite. Nitrobacter convert the nitrite into nitrate, which can then be lost through nitrate leaching, or to the atmosphere as nitrous oxide emissions.

Vizura® slows down the conversion of ammonium to nitrite by inhibiting the action of the Nitrosomonas bacteria. Vizura® reduces both nitrate leaching and nitrous oxide emissions and offers nutritional benefits to the crop.

Dose rate

Spring dose rate: 2.0 l/ha

Autumn dose rate: 3.0 l/ha

Application

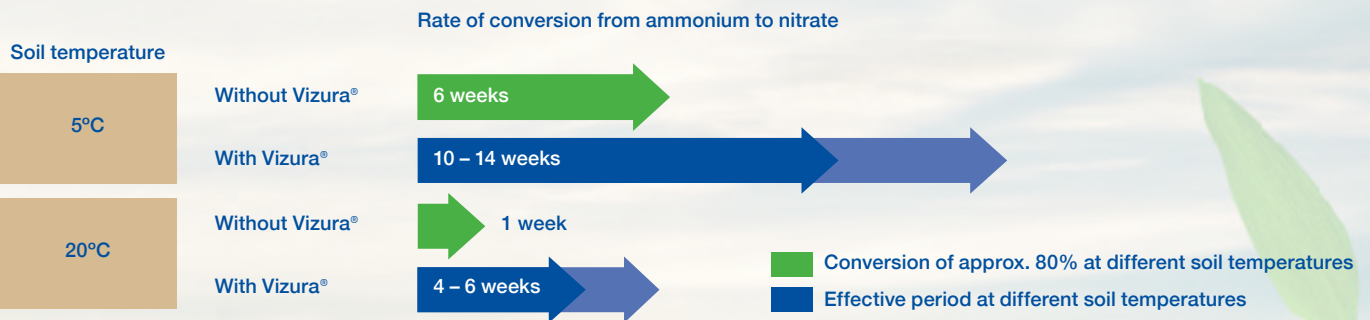
Add into the main slurry filling line or into the suction hose

For optimum performance, it is important that Vizura® is evenly distributed throughout the slurry or digestate.

For more information,
visit agricentre.basf.co.uk/vizura

Why add Vizura® to your slurry or digestate?

Vizura® keeps nitrogen in the ammonium form for longer



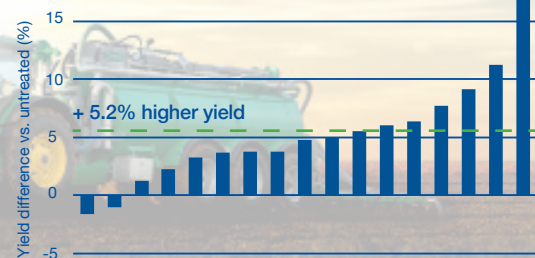
Advantages of ammonium-based nutrition

- Plants can directly use ammonium for protein synthesis, whereas nitrates first need to be converted by the plant into ammonium, which requires energy.
- Ammonium uptake improves availability of phosphate and micronutrients due to a lowering of the pH value around the roots.
- Ammonium-based nutrition encourages root growth and increases the plant's resistance to stress.

Vizura® increases yield

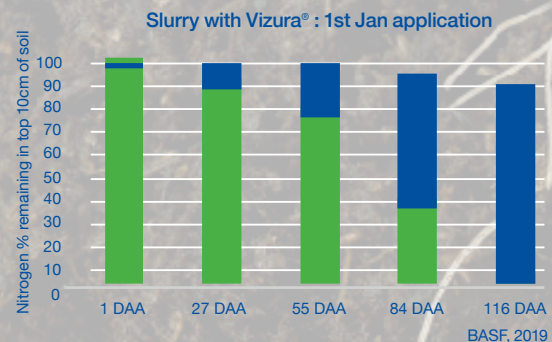
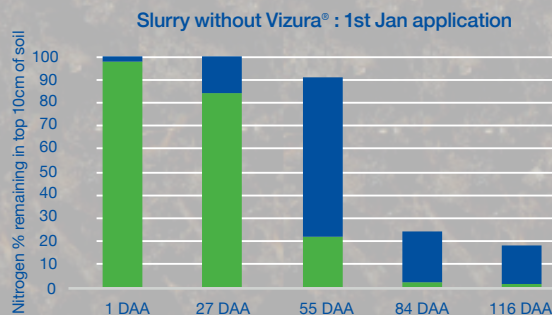
Slurry + Vizura® - Additional yield

Yield increase (%) from Vizura® - winter wheat, 17 trials, BASF



Vizura® reduces nitrogen losses

Ammonium Nitrate
*DAA: Days after application



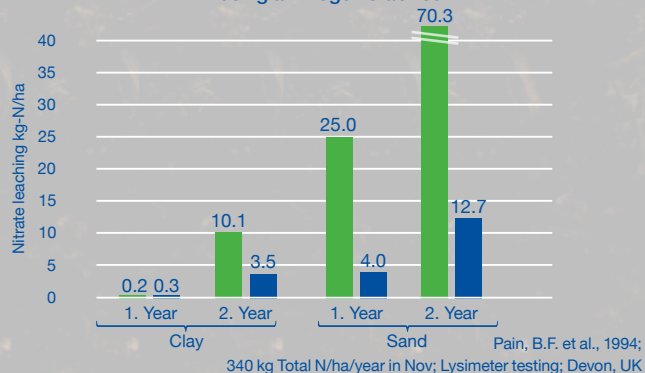
When Vizura® is added to slurry, it maintains the nitrogen in the ammonium form for longer which helps to prevent the loss of nitrogen via leaching.

In this trial, Vizura® helped to keep more than 90% of the nitrogen in the top 10cm of the soil by the end of April (116 DAA). Without Vizura®, less than 20% remained.

Vizura® reduces nitrate leaching

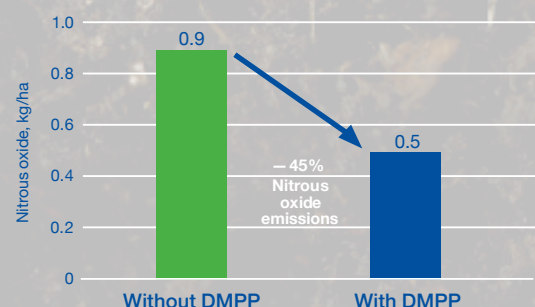
Without nitrogen stabiliser With nitrogen stabiliser

Yearly nitrate leaching on grassland for different soils when using a nitrogen stabiliser



Vizura® reduces nitrous oxide emissions

Influence of DMPP on nitrous oxide emissions from slurry



Dittert et al 2001