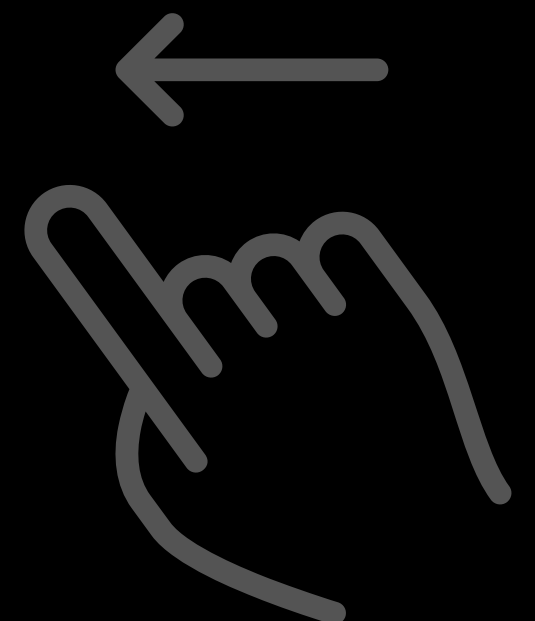


# What you should know about your nitrogen loss

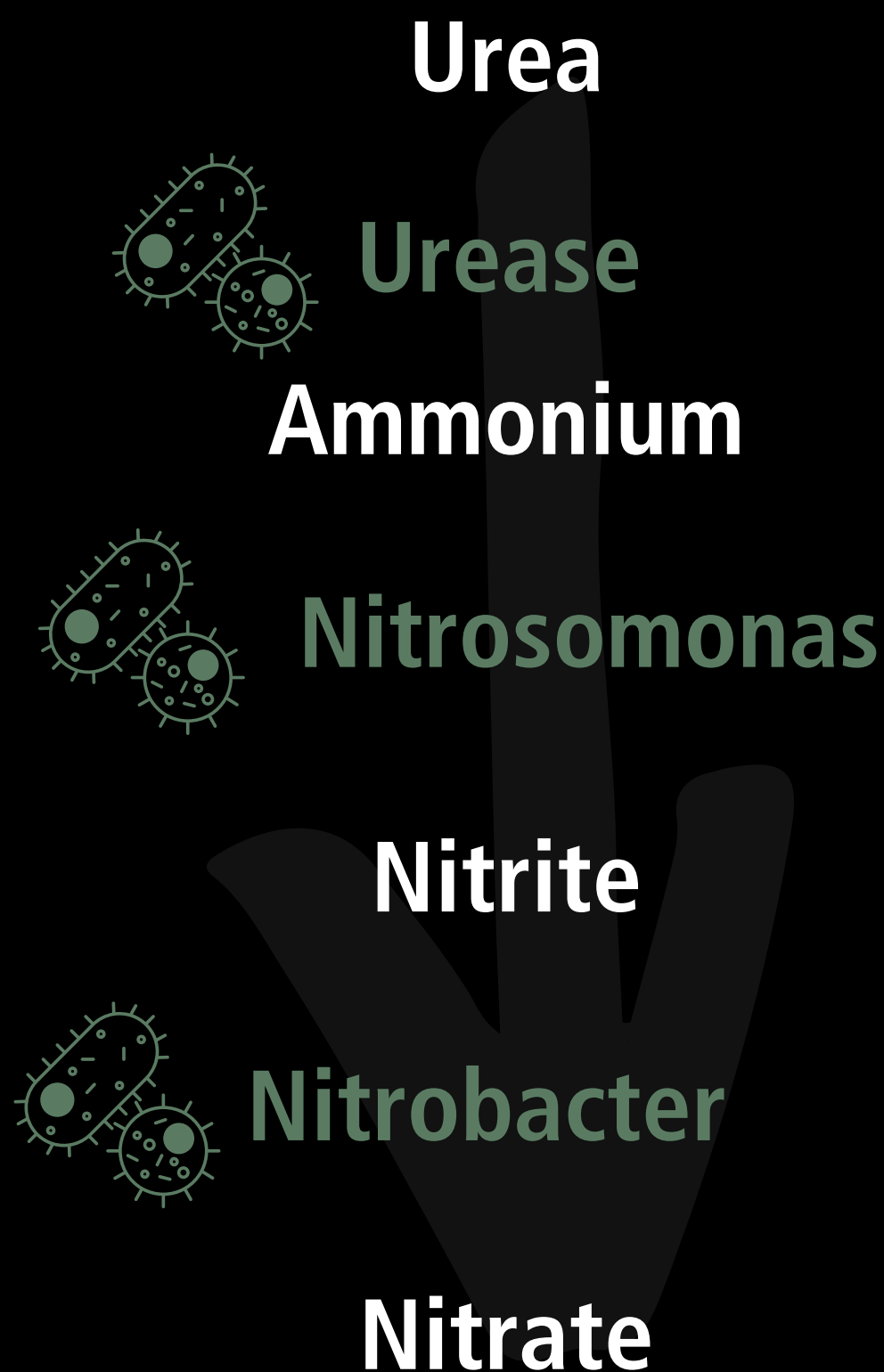


The nitrogen cycle involves changing forms to move through living and non-living entities like atmosphere, soil, water, plants, animals, and soil micro-organisms.

Understanding how farm-applied nitrogen participates in this cycle is crucial for identifying potential nitrogen loss sources.

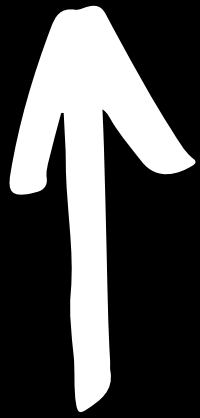


Bacteria and enzymes in the soil (urease, nitrosomonas & nitrobacter) consume the varying forms of nitrogen in the soil, and play a crucial part in converting it into the next phase.



Nitrogen applied on farm can be lost through a number of channels. A majority of losses occur as nitrogen cycles through the various forms

**Volatilisation**  
Ammonia  $\text{NH}_3$

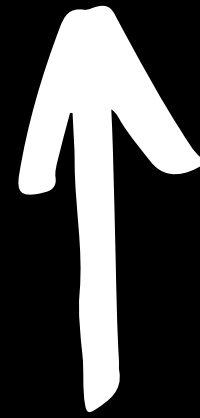


**Urea**

**Ammonium**



**Denitrification**  
Di Nitrogen  $\text{N}_2$   
Nitrous Oxide  $\text{N}_2\text{O}$



**Nitrate**



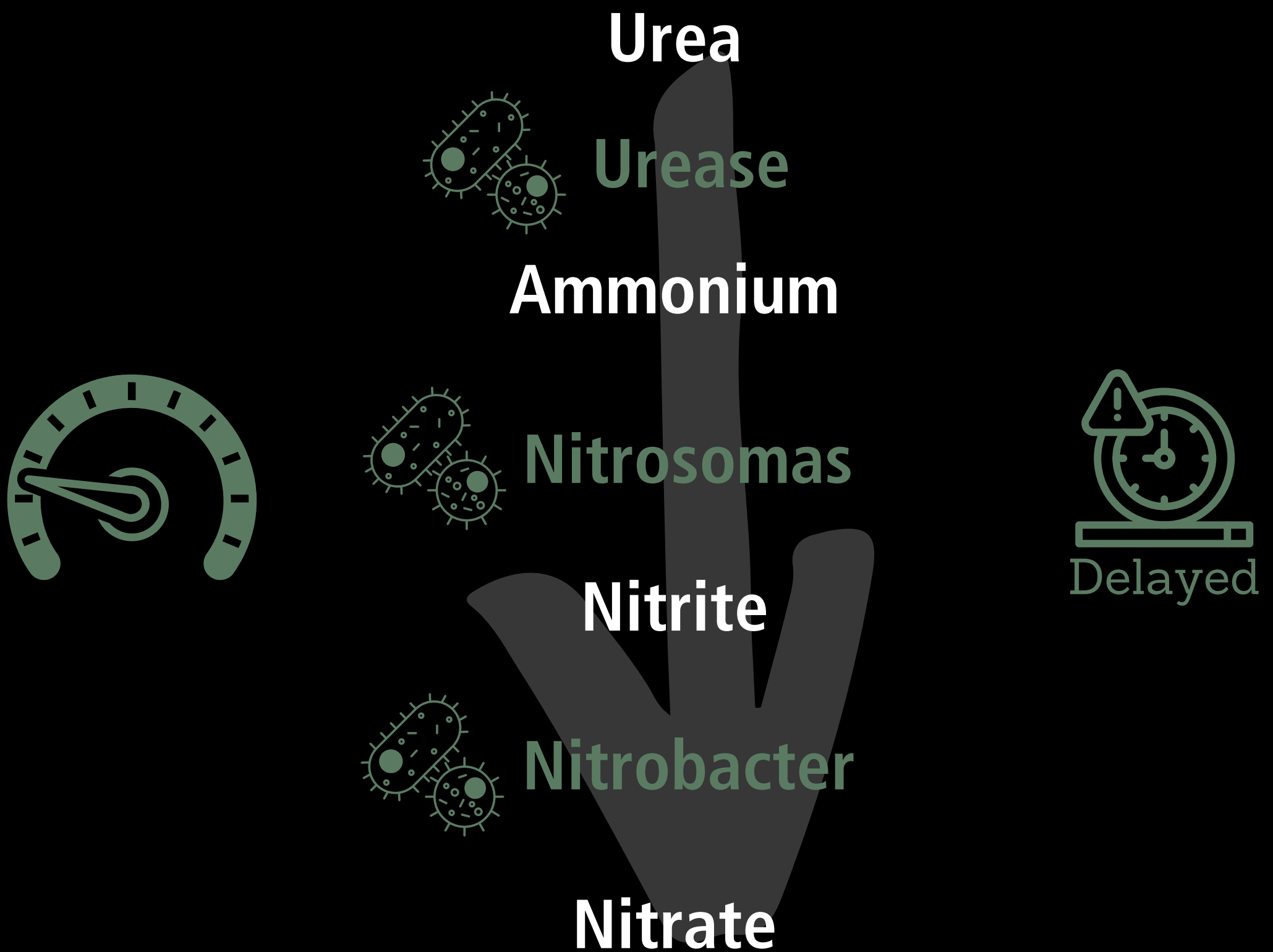
**Leaching**  
Nitrate  $\text{NO}_3$

The speed at which nitrogen moves through the cycle is dependent on a number of factors including organic matter, soil biology, temperature, moisture and pH.

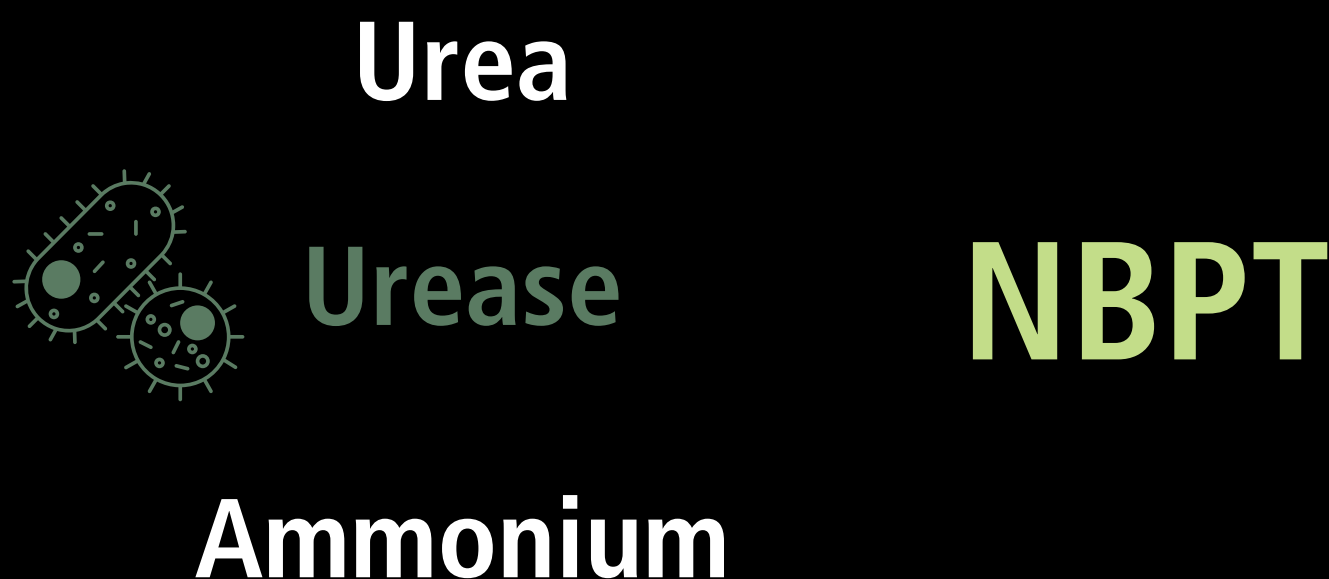


By delaying the cycle, nitrogen can be held in a form that is less prone to moving outside of the root zone where your plants are able to utilise it.

This allows a grower to match nitrogen availability to the plant's needs and growth and reduce nitrogen losses.



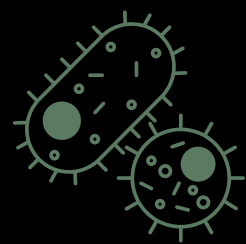
NBPT (a urease inhibitor) added to surface-spread urea can delay its conversion into ammonium, reducing reliance on post-spreading moisture and lowering the risk of nitrogen loss as ammonia to the atmosphere. This makes more nitrogen available to the plant when needed



Green Urea is the NBPT urease inhibitor favoured by Incitec Pivot  
Fertilisers



Urea



Urease

NBPT

Ammonium



# Should you be applying a NBPT based inhibitor?

NBPT (Green Urea) checklist for application

- spreading urea
- surface applying
- want to avoid losses

Ask for:



Note: Not appropriate for application in green cane trash blanket

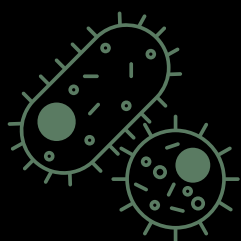
DMP (a nitrification inhibitor) added to subsurface applied nitrogen can delay its conversion to nitrate. This holds the nitrogen in the plant available ammonium form longer.

Slowing the conversion to nitrate reduces the risk of losses through denitrification (GHG Nitrous Oxide) and leaching

**Urea**  
**Ammonium**



Delayed



**Nitrosomas**

**DMP**

**Nitrate**

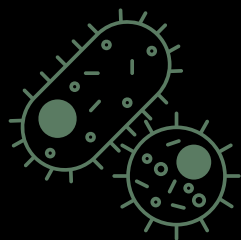


Did you know: nitrous oxide is a green house gas with 273 times the warming potential of carbon dioxide.

eNpower is the DMP nitrification inhibitor preferred by Incitec Pivot  
Fertilisers

**eNpower<sup>®</sup>**

**Urea  
Ammonium**



**Nitrosomonas**

**DMP**

**Nitrate**

# Should you be applying a DMP based inhibitor?

## DMP (nitrification inhibitor) checklist for application

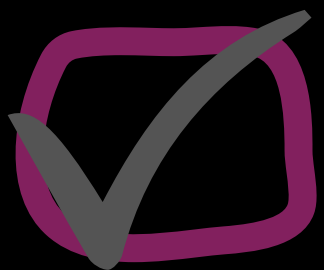


sub-surface applying nitrogen

(Urea, DAP, Gran Am, Blends)



irrigation, high rainfall or waterlogging  
risk



Leaky soils with leaching potential



reduce green house gases



reduce lost nitrogen

Ask for:

**eNpower**<sup>®</sup>

# How do I get it?

1

Ask Incitec Pivot Fertilisers to treat your nitrogen (straight or blend) with Green Urea or eNpower

That's it:

Incitec Pivot will apply the treatment to your order.

It arrives ready to apply on the farm.

No other equipment, systems or work is required.

