

EXPERTS FOR GROWTH



**COMPO  
EXPERT®**



**Novatec®**

**Granular Stabilised – Ammonia Fertilizer**



# NovaTec® - General Benefits



## Advantages of NET technology

- ❑ Premium quality granular complex compound fertilizers
- ❑ All granules contain N, P, K, Mg, S and trace elements
- ❑ Low in chloride (potassium from SOP)
- ❑ Fast and slow acting nitrogen source with nitrate N and stabilised ammonium N
- ❑ Perfect granulometry (90% granules within 2 – 4mm) for even application
- ❑ Highly available source of phosphate (>80% water soluble)
- ❑ Low in dust and high in granule strength for best spreading properties
- ❑ Enhanced nutrient efficiency with stabilised N
- ❑ German quality from manufacturing to packaging

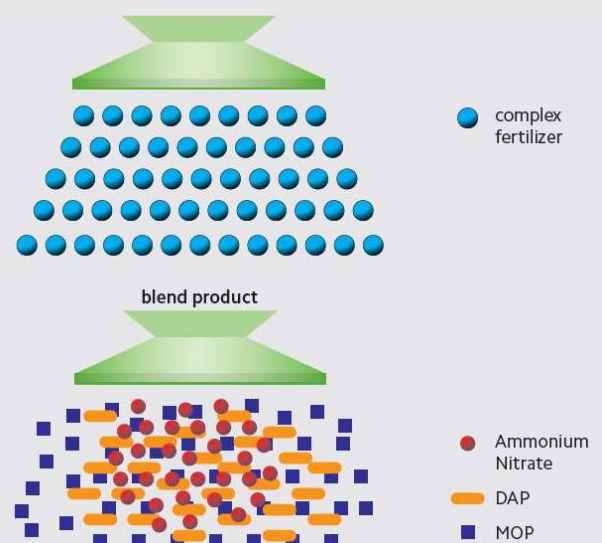
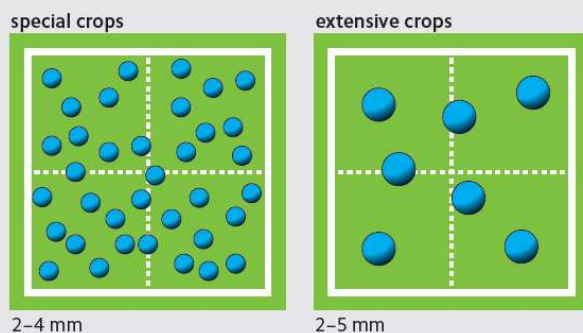


## NovaTec® physical and chemical properties

### Advantages of complex compounds vs blended compounds

- ❑ No differential segregation of granules
- ❑ Superior homogenous nutrient distribution in the field
- ❑ More accurate spreading is possible
- ❑ High nutrient efficiency
- ❑ Easier and labour saving handling
- ❑ Less storage capacity required

### Homogenous granulometry 2-4 mm for superior distribution

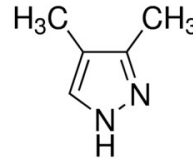


# NovaTec® - Product Range

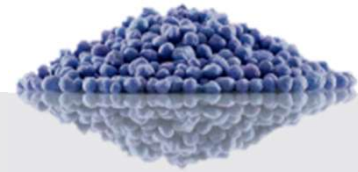


## NovaTec® Range (with DMPP)

- NovaTec® Classic 12-8-16 (+Mg + S + TE)
- NovaTec® Premium 15-3-20 (+Mg + S + TE)
- NovaTec® Suprem 21-5-10 (+Mg + S + TE)
- NovaTec® N-Max 24-5-5 (+Mg + S + TE)



$H_3PO_4$  = Dimethylpyrazolophosphate  
= DMPP



# NovaTec® Application Guidelines

Crop	Annual Demand (kg/ha)	Application Frequency per year
Greenhouse Vegetables	800 – 2000	2 – 3
Brassicas	1600 – 2500	2 – 3
Lettuce, carrots, onions	700 – 1200	1 – 2
Strawberries	700 – 1000	1
Fruit trees	300 – 800	1
Soft fruits	600 – 1100	1
Grapevines	300 – 600	1
Potatoes	500 – 1200	1 – 2

For a detailed recommendation, please contact your local NovaTec® Dealer

**NovaTec® with nitrification inhibitor has shown superior performance especially under the following conditions**

- Free draining soils
- Close proximity to water courses and sensitive habitats
- Sparse/shallow root system (e.g. potatoes, lettuce)
- High soil pH



# NovaTec® - Granular range with NET (Nitrogen Efficient Technology)



## Advantages of NET technology

### 1) Better use of the nitrogen provided:

With fewer nutrient losses through leaching.

### 2) Optimal crop yield:

NET technology allows you to ensure availability of nitrogen in the 2 forms absorbable by the plant (nitrate and ammonium):

### 3) Energy savings:

The plant, by directly absorbing ammonium nitrogen, avoids a step in the natural process of the transformation of nitrogen into proteins, ultimately increasing production.

### 4) Improved flowering:

The absorption of ammonium promotes the synthesis of phytohormones (gibberellins and cytokinins) and polyamines, responsible for flowering.



## Features of the NovaTec® range

### Quality raw materials

Nitrogen (in nitric and ammonium form only), phosphorus and potassium (free of chlorine and sodium), of maximum quality and highly dissolvable.

### A comprehensive, environmentally-friendly range.

For all types of crops and fertiliser programmes, contributing to more environmentally-friendly agriculture.

### Safety and ease of use

Crystalline fertilisers are homogeneous, free of carbonates and free of impurities. Its high acidifying power prevents obstructions in irrigation emitters and improves the absorption of soil microelements.

### Official certifications

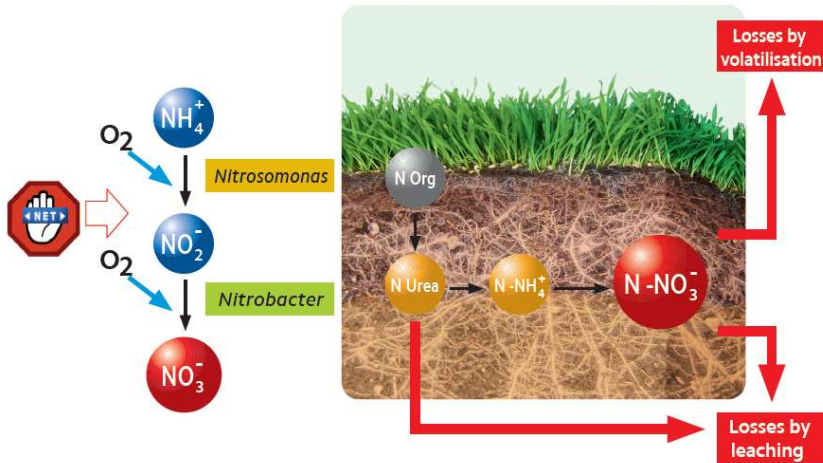
The NovaTec® range has all the certifications required by EuroGAP and GlobalGAP:

- Technical data sheets
- Safety data sheets
- Certifications of heavy metals





# Novatec® - How Does It Work?



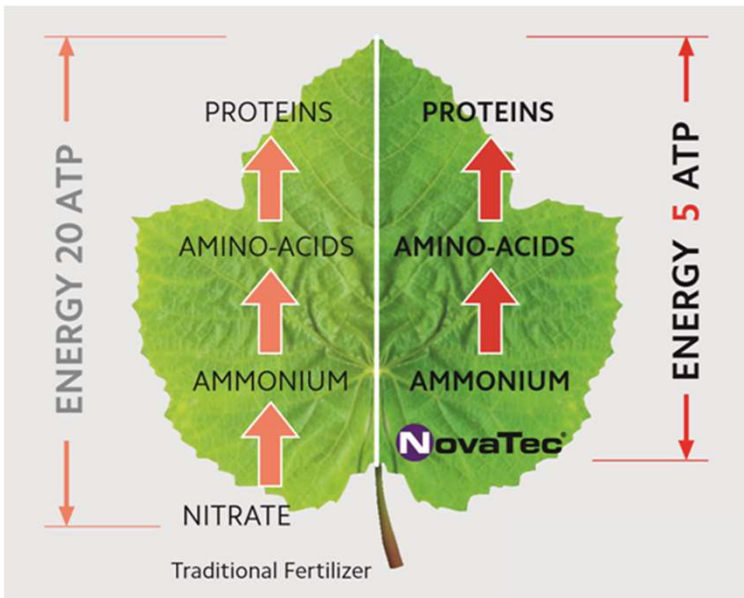
NovaTec® contains the nitrification inhibitor 3,4-dimethylpyrazole phosphate (DMPP). This molecule **inhibits** the nitrosomonas bacteria present in the soil, which are responsible for the transformation of ammonium into nitrite, eventually to nitrate.

- ❑ Ammoniacal nitrogen is retained in the soil by the clay-humic complex, while nitrogen in nitrate form is highly soluble and easily washable, thus achieving greater nitrogen availability for cultivation.
- ❑ In this way, only the formation of nitrates is avoided, ensuring the nitrogen in the soil in the ammonia form for a time, reducing the risk of nitrate leaching.

■ Can help to reduce free nitrate levels in fresh mass



# Novatec® - Benefits of Ammonia Nutrition



The above delay in the nitrification of Ammonium ( $\text{NH}_4^+$ ) to Nitrate ( $\text{NO}_3^-$ ) leads to more efficient  $\text{NH}_4^+$  nutrition.

- ❑ Energy savings by Ammonium N-nutrition (no biological reduction required)
- ❑ Enhanced flowering (ammonia promotes synthesis of phytohormones and polyamines)
- ❑ Ammonium nutrition favours root growth
- ❑ Crops develop and ripen more evenly due to a stabilised N supply
- ❑ Can help to reduce free nitrate levels in fresh mass

ATP = Adenosine Triphosphate.  
ATP is one of the most important energy transmitters in plants





## Novatec® - The pH Effect

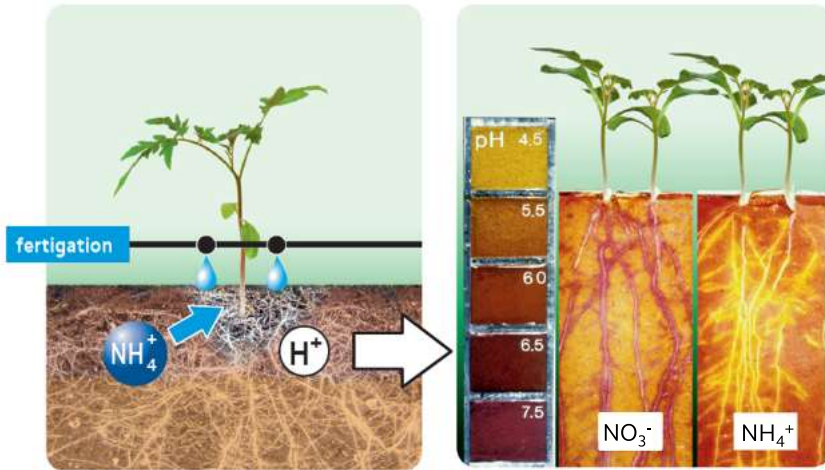


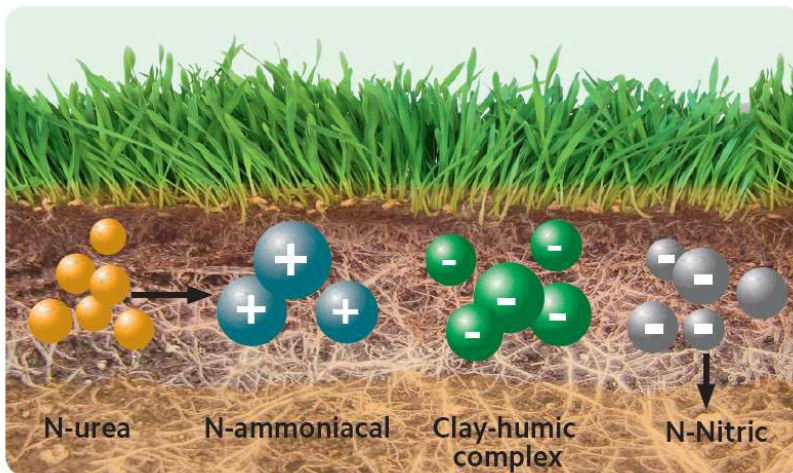
Photo: Römheld, University of Hohenheim

Ammonium nutrition leads to temporary acidification of the rhizosphere

- Absorption of micro elements and phosphate is increased by this effect
- This effect is temporary and localised around the roots, ensuring no negative pH effects on the soil



## Novatec® - Less Nitrogen Loss



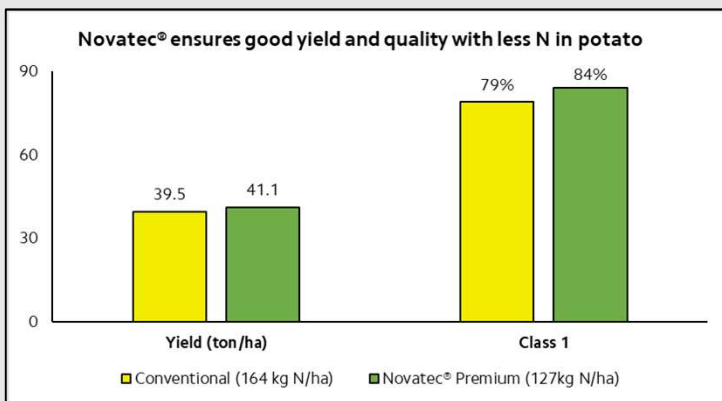
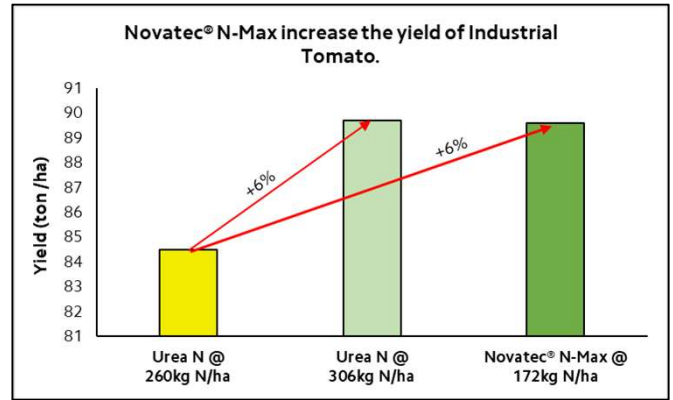
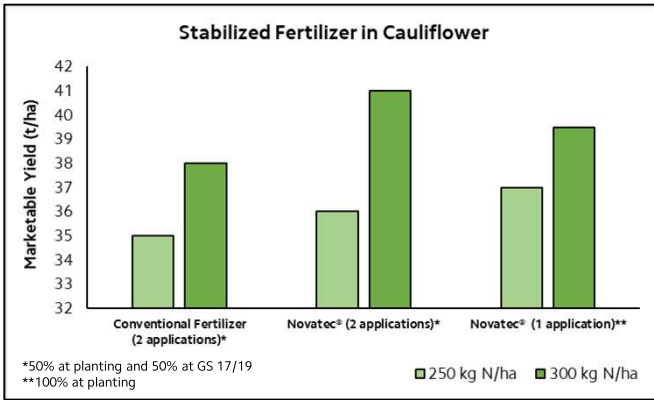
Novatec® strongly reduces N-leaching due to a higher ammonium concentration in the soil

- Ammoniacal nitrogen is retained in the soil by the clay-humic complex, while nitrogen in nitrate form is highly soluble and easily washable, thus achieving greater nitrogen availability for cultivation
- In this way, only the formation of nitrates is avoided, ensuring the nitrogen in the soil in the ammonia form for a time, reducing the risk of nitrate leaching.
- Novatec® leads to significant ground water protection

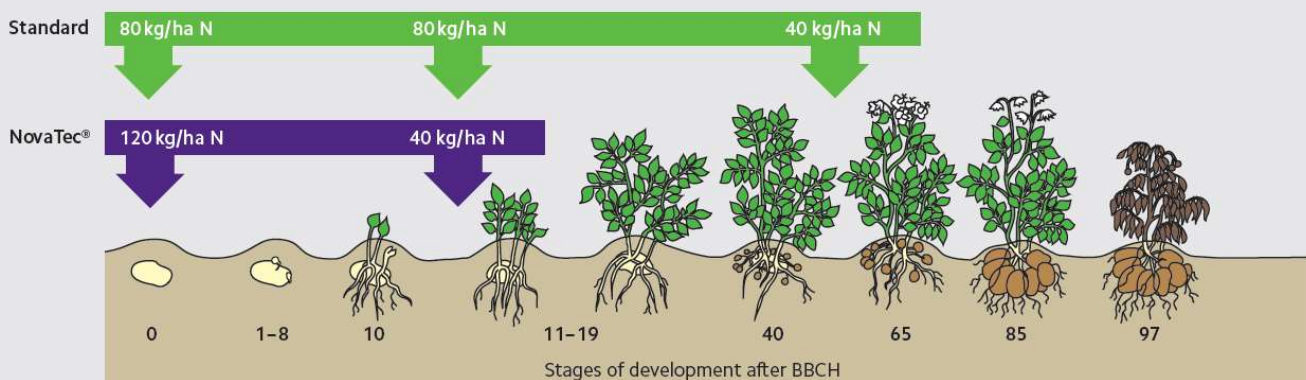




# NovaTec® – Trial Results



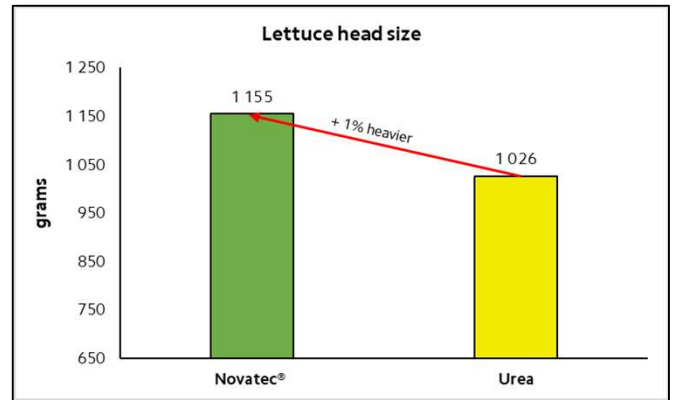
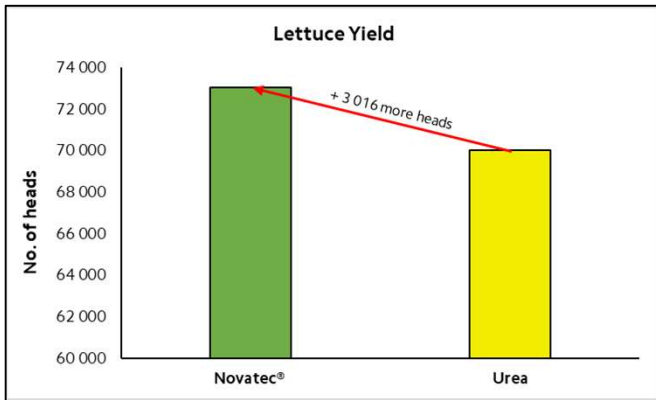
## Application in potatoes



NovaTec®: ensures the N supply, even when applying in early growth stages.



## NovaTec® – Trial Results

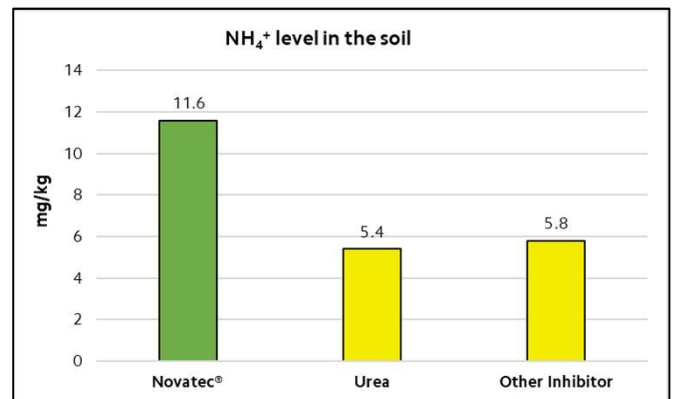
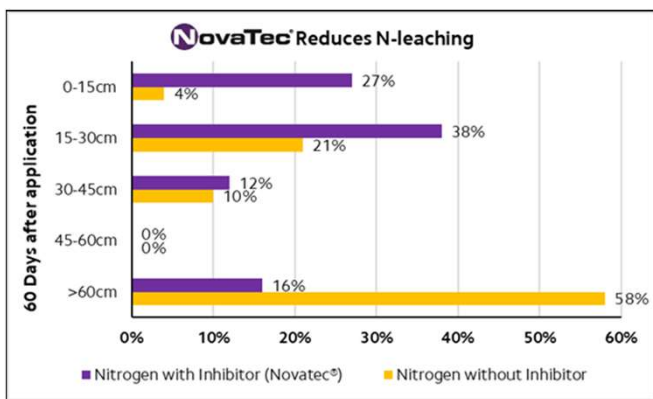


### Growth of lettuce when fertilized with Novatec®

- Compact growth, denser plant
- Better storability and shelf life



## NovaTec® – Soil Nitrogen levels





WE ARE YOUR  
**EXPERT FOR GROWTH**



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