

EXPERTS  
FOR GROWTH

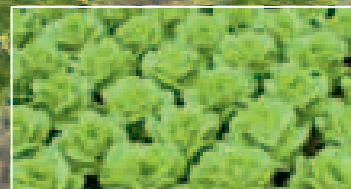
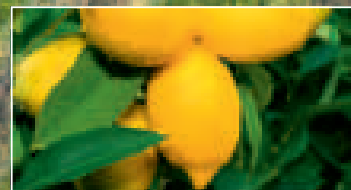


## Partly coated Fertilizer



# DuraTec<sup>®</sup>

- The new standard in NPK fertilization
- 2NT: Unique Double Nitrogen Technology
- Immediate and long-term effect
- Fine and even Granules easy to apply
- Higher marketable yield and improved Crop Quality
- Improved efficiency and environmentally friendly





**DuraTec®**

## What is 2NT?

### 2NT inside – Unique Nitrogen Technology



=



25% of N coated with supply of all nutrients over 3 months

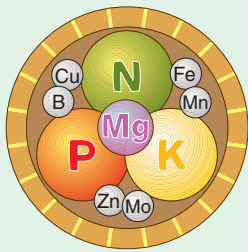
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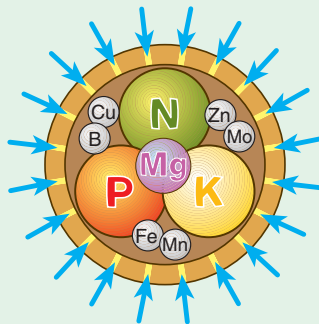
Rest of Ammonium N stabilized with DMPP

DuraTec®

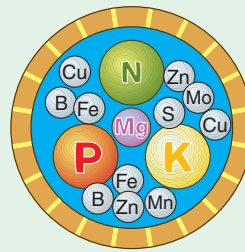
## How does it work?



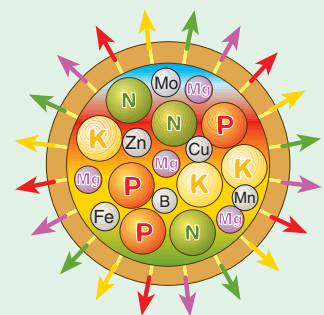
NPK-granules are partly coated with an elastic polymer.



After application, water enters through the pores.



The nutrients are dissolved in water. The result is a concentrated nutrient solution.



A controlled nutrient release over 3 months.

3 months longevity

### ■ Partly coated Fertilizer:

Coated NPK plus non-coated NPK



Controlled Release

+



Immediate Release





## DuraTec®

### The perfect coating

#### ■ Even thickness

Ensuring high crop safety through controlled nutrient release

#### ■ High elasticity

High safety; mechanical damage is reduced to a minimum

#### ■ Frost resistance

- High frost resistance of the new coating, even under high temperature fluctuations
- Coating consists of elastic polymer and is slowly broken down in the soil

#### ■ Release linked (CAR-Technology) to temperature

Ensures nutrient availability according to the plant requirements

#### ■ Trace element supply

Micronutrients (B, Fe, Zn) are supplied in every granule



High Elasticity of Coating



High Application security

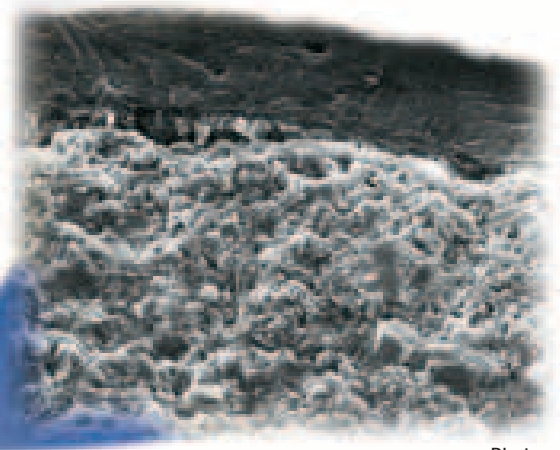
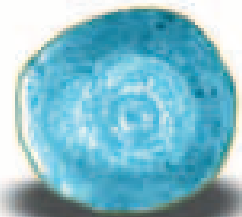


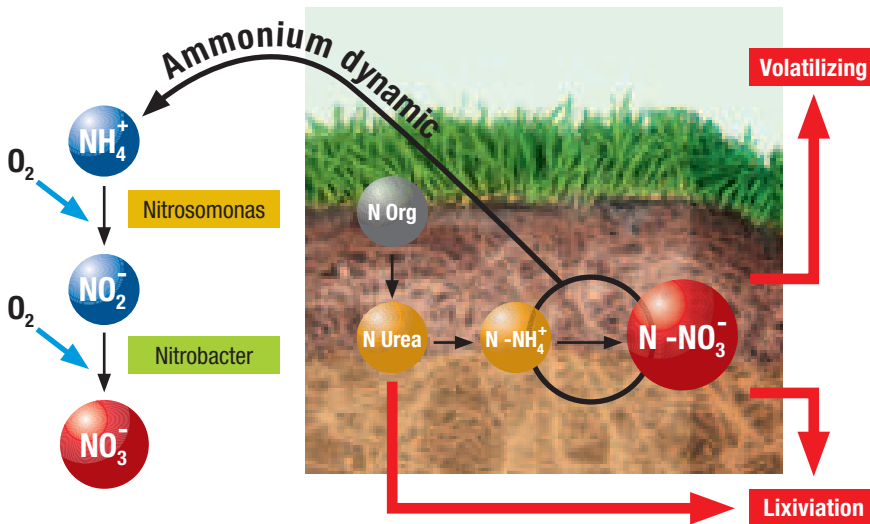
Photo:  
Microscopic view (2000x) of  
a DuraTec® granule





## DuraTec® – How does it work?

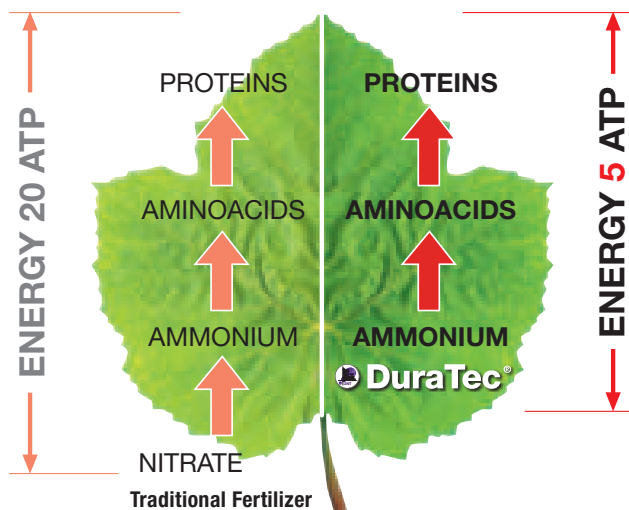
### Ammonium-based fertilization with nitrification inhibitor



- DuraTec® delays the nitrification of Ammonium ( $\text{NH}_4^+$ ) to Nitrate ( $\text{NO}_3^-$ )
- DuraTec® leads to a more efficient  $\text{NH}_4^+$ -based N-nutrition
- Environmental benefits: Lower emission of Greenhouse Gases and reduction of Nitrogen leaching



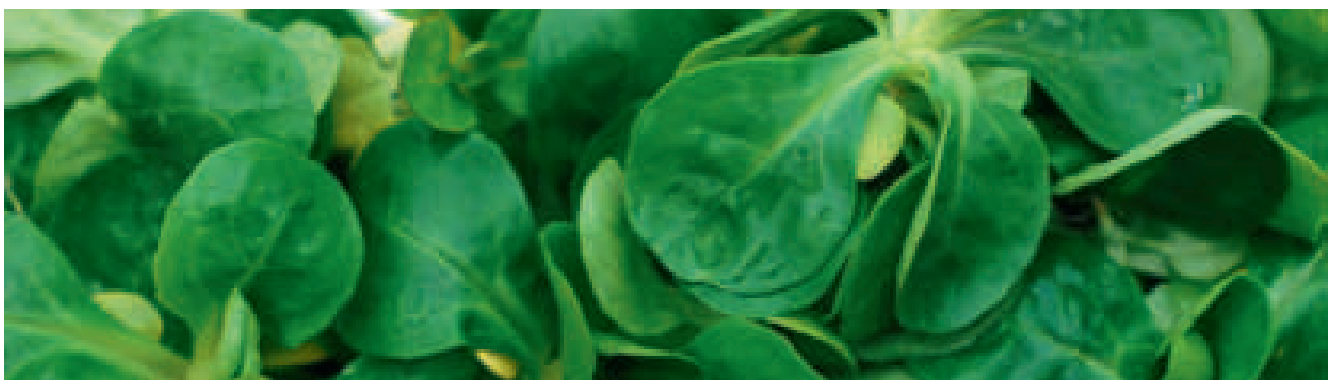
## DuraTec® – Ammonium Nutrition



- Energy savings by Ammonium-N-nutrition (no biological reduction required)
- Enhanced flowering (Ammonium promotes synthesis of phytohormones and polyamines)
- Ammonium nutrition favours root growth

ATP = Adenosine Triphosphate.

Is one of the most important energetic carriers in organism.



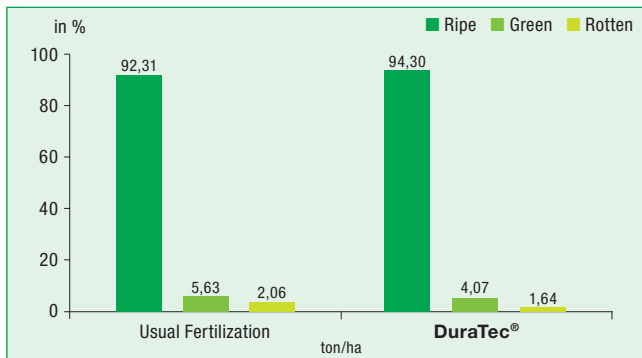


**DuraTec®**

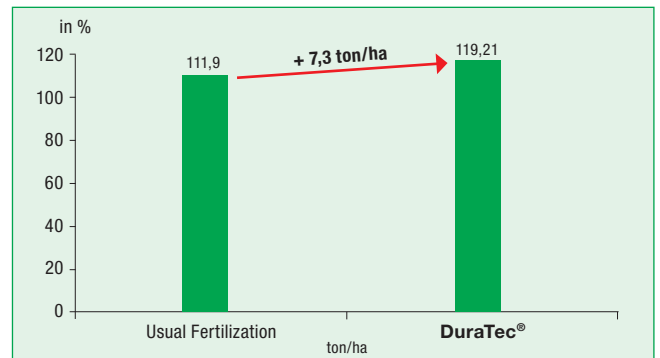
## Trial results

**Agricultural yield: DuraTec® in comparison to conventional fertilization (Industry tomatoes, Brasil, 2010)**

### Qualitative comparison of productivity



### Quantitative comparison of productivity



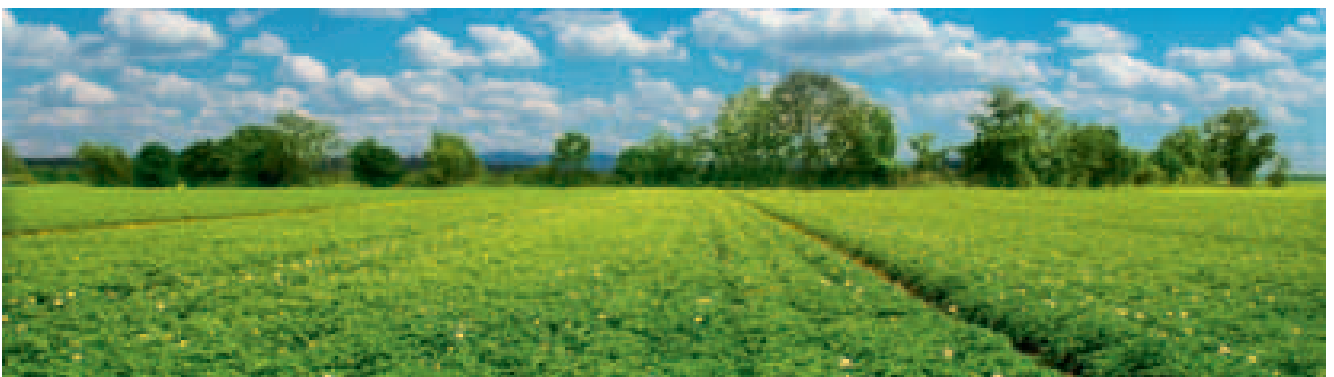
### Yield after 119 days



Usual Fertilization



DuraTec®





**DuraTec®**

## Product Portfolio

Product	Composition	Characteristics	Presentation	Use
<b>DuraTec® Top 14</b>	14-7-14 (+3MgO+9S+TE)	Partly coated NPK-Fertilizer - 25% of total N is coated - Nitrogen Split: 6.0% NO <sub>3</sub> , 8.0% NH <sub>4</sub> - incl. 0.02% B, 0.06% Fe, 0.01% Zn - granule size 2–4 mm - for vegetables, fruits and other horticultural and agricultural crops	Bag: 25 kg  Pallet size: 42 bags à 25 kg  Container: 20': 21 mt	Application rate: 200–1.000 kg/ha
<b>DuraTec® Top 21</b>	21-5-9 (+3MgO+6S+TE)	Partly coated NPK-Fertilizer - 25% of total N is coated - Nitrogen Split: 10.0% NO <sub>3</sub> , 11.0% NH <sub>4</sub> - incl. 0.02% B, 0.25% Fe, 0.015% Zn - granule size 2–4 mm - for vegetables, fruits and other horticultural and agricultural crops	Bag: 25 kg  Pallet size: 42 bags à 25 kg  Container: 20': 21 mt	Application rate: 200–1.000 kg/ha
<b>DuraTec® Top 24</b>	24-5-5 (+3MgO+5S+TE)	Partly coated NPK-Fertilizer - 25% of total N is coated - Nitrogen Split: 11.0% NO <sub>3</sub> , 13.0% NH <sub>4</sub> - incl. 0.02% B, 0.06% Fe, 0.01% Zn - granule size 2–4 mm - for vegetables, fruits and other horticultural and agricultural crops	Bag: 25 kg  Pallet size: 42 bags à 25 kg  Container: 40': 21 mt	Application rate: 200–750 kg/ha



Folder partly coated fertilizer