

# Plant nutrition courier

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The best bits of plant nutrition research

2023-03



**Calcium and its antagonists control potato powdery scab 7**

*High-throughput screening of nitrification inhibiting crops 4*

*Grass nitrogen yield linked to soil pH, not Ca:Mg ratio 9*

*Soil scientists: soil solution pH says little about plant-availability of nutrients 12*

*Recent plant nutrition patent publications 34*





## High-throughput screening of nitrification inhibiting crops 4

Belgian scientists have assembled a hydroponic system for large-scale screening of plants for biological nitrification inhibitor capacity. *Picture: Gembloux Agro-Bio Tech*

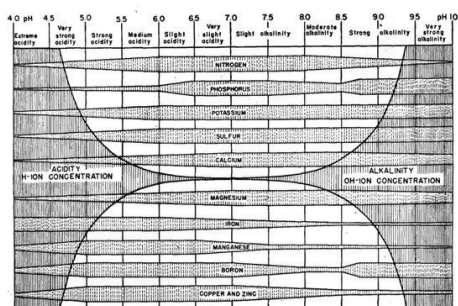


## Calcium and its antagonists control potato powdery scab 7

Calcium as well as its antagonists counteract powdery scab zoospores in localising and infecting potato roots, stolons and tubers.



## Grass nitrogen yield linked to soil pH, not Ca:Mg ratio 9



## Soil scientists: soil solution pH says little about plant-availability of nutrients 13

### Arable farming

- 5 Iron-rich sand reduced nitrate leaching
- 5 Phosphate uptake affected by antibiotic
- 5 Scientists scrutinise significance of silicon for plants
- 6 Monopotassium phosphate spray protects wheat against heat stress
- 6 Drought-stressed wheat could benefit from ammonium-nitrogen
- 6 Water scarcity frustrates cultivation of cover crops
- 6 Cobalt relieves droughtstress effects
- 6 Copper reduces nitrous oxide emission from nodules
- 6 Potassium spray increased uptake of soil potassium
- 6 Selenium protects crops against diseases and pests

### Potato nutrition

- 7 Calcium and its antagonists control potato powdery scab
- 14 Best practice for chlorophyll a fluorescence diagnosing of phosphorus in potato
- 8 Publications about potato nutrition research

### Grass and forage

- 9 Grass nitrogen yield linked to soil pH, not Ca:Mg ratio

### Fruits and vegetables

- 8 Extreme slaked lime application rate keeps clubroot away for years
- 9 Potassium foliar fertiliser pH does matter

### Biological and synthetic nitrification inhibitors

- 4 High-throughput screening of nitrification inhibiting crops
- 5 Sorghum intercrop inhibits nitrification under maize
- 5 Hydrophilic nitrification inhibitor found in maize roots
- 10 Doubts about mode of action of nitrification inhibitors DMPP and DMPSA
- 10 Nitrification inhibitor from grape marc

### Fertilisers

- 10 Reviews of enhanced efficiency nitrogen fertilisers scrutinised
- 10 Hydroabsorbents reduce ammonia volatilisation from urea ammonium nitrate
- 10 Sensor detects crystal water
- 10 At-field and on-demand nitrogen synthesis for fertigation
- 11 Soil type and cultivation period determine the added value of polyphosphate
- 11 Milling elemental sulphur into water-soluble fertiliser
- 11 Fertiliser to stimulate bioremediation of marine oil spill pollution
- 11 Publications about new, experimental and potential fertiliser formulations

### Plant and soil analytics

- 13 Soil scientists: soil solution pH says little about plant-availability of nutrients
- 14 Best practice for chlorophyll a fluorescence diagnosing of phosphorus in potato
- 14 Silicon content in plant material can best be determined with Tiron extractant
- 14 Freeze and thaw policy for water samples for silicon measurements
- 14 Tracking the path of foliar-applied nutrients
- 14 Monitoring soil carbon sequestration

### Silicon

- 5 Scientists scrutinise significance of silicon for plants
- 14 Silicon content in plant material can best be determined with Tiron extractant
- 14 Freeze and thaw policy for water samples for silicon measurements

### Plant nutrition patents

- 34 Recent plant nutrition patent publications

### Literature / Calendar

- 8 Publications about potato nutrition research
- 11 Publications about new, experimental and potential fertiliser formulations
- 15 Publications about plant nutrition research
- 40 Calendar of events

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Nitrogen	21	Silicon 31
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Fertiliser companies



Fertiliser research



Liquid fertiliser applicators



Soil services



Agricultural cooperatives  
(Dutch - with international network of subsidiaries)



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