

# Plant nutrition courier

The best bits of plant nutrition research

2019-04

## Vegetables affect rootzone pH differently 8

Optimizing fertiliser banding to avoid root death 4

Nitrogen fertiliser timing affects potato early blight susceptibility 6

Drug delivery as lead for new fertilisers 9

New urease and nitrification inhibitors 11

Single image sufficient to detect stress in indoor-grown crops 15

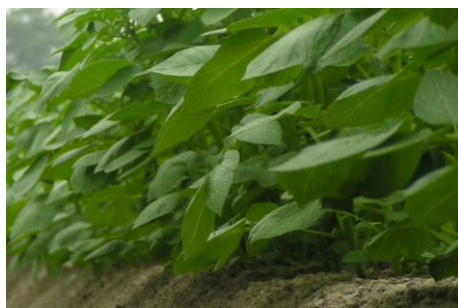
Lack of reporting on phosphorus supply chain dangerous for global food security 33



## Optimizing fertiliser banding to avoid canola root death 4

American agronomists used new imaging and analysis techniques to see canola roots interacting with fertiliser and developed dose-response curves for fertilisers.

Picture: Washington State University



## Nitrogen fertiliser timing affects potato early blight susceptibility 6



## Drug delivery as lead 9

Scientists are working on fertilisers equipped with the latest in delivery technologies.

Often these products are synthesized with sophisticated drug delivery systems as lead.



## New urease and nitrification inhibitors 11

### Arable farming

- 4 Optimizing fertiliser banding to avoid canola root death
- 5 Chinese researchers: Densely planted grain maize yields better on broadcasted than on banded fertiliser
- 6 Drought-stressed beet observed to benefit from foliar-applied calcium chloride
- 6 Nitrogen affects wheat leaf antioxidant properties
- 6 Potassium alleviates iron deficiency-induced chlorosis

### Potato nutrition

- 6 Nitrogen fertiliser timing affects potato early blight susceptibility
- 6 Unbiased comparison of cultivars for nitrogen use efficiency
- 6 Large tubers compete for phosphorus accumulation
- 7 Publications about potato nutrition research

### Fruits and vegetables

- 8 Vegetables affect rootzone pH differently
- 8 High nitrogen levels favour organic phosphorus accumulation in phosphorus-rich calcareous soils
- 8 Overdose of manganese sulphate alleviates effects of citrus greening disease
- 8 Selenium improves apple fruit quality and storability

### Fertilisers

- 9 Drug delivery as lead for new fertilisers
- 10 Tracing the source of calcium ammonium nitrate
- 10 Yearly innovation award
- 10 Oxidized biochar increases nitrogen recovery from ammonium sulphate fertiliser
- 11 Dimethylolurea alternative to urea formaldehyde
- 11 Granulation strategy for super urea granules
- 12 Publications about new, experimental and potential fertiliser formulations

### Urease and nitrification inhibitors

- 11 Urea with dual action inhibitor properties
- 11 Experimental DHPM urease inhibitors
- 11 New vegetable urease and nitrification inhibitors

### Rhizobia and mycorrhizae

- 14 Nodulation of legumes connected to higher resistance against powdery mildew
- 14 Multi-species inoculum outperforms single-species inoculum at multiple stresses

### Plant and soil analytics

- 15 Single image sufficient to detect stress in indoor-grown crops
- 15 New approach for nutrient uptake research

### Plant nutrition politics

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- 36 Maladaptation Game

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- 12 Publications about new, experimental and potential fertiliser formulations
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### Publications about plant nutrition research

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Fertiliser companies



Agricultural cooperatives  
(Dutch - with international network of subsidiaries)



Liquid fertiliser applicators



Fertiliser research



Trial equipment



Soil services



Biostimulants



Mycorrhizae



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Colophon

Editor	<a href="#">Gert van den Berg</a>
Publisher	Landbouwkundige Uitgeverij G.C. van den Berg
Address	Van Maerlantstraat 5, 3906 EL Veenendaal, The Netherlands
Website	<a href="http://www.plantnutritioncourier.nl">www.plantnutritioncourier.nl</a>
Subscriptions	Small: € 125,00/year ex VAT (1 - 10 readers at one physical location of the organisation). Medium: € 375,00/year ex VAT (11 - 50 readers at multiple physical locations of the organisation). Worldwide: € 825,00/year ex VAT (worldwide in-company subscription).
Single issues	€ 40,00/issue ex VAT.

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