

# Plant nutrition courier

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The best bits of plant nutrition research

2021-04

## *New plant nutrients on the horizon 4*

*High nitrogen availability hampers deep nitrogen uptake in cruciferous catch crop 8*

*New cropping system for potatoes 9*

*Sodium glucoheptonate can replace less degradable manganese chelates 10*

*Tomato cultivars differ in silicon uptake 33*



**High N availability hampers deep nitrogen uptake by catch crop** 8  
A high mineral nitrogen content in the top-soil hampers nitrogen uptake from deep soil layers by oilseed radish grown as autumn-sown nitrogen catch crop.



**New cropping system for potatoes** 9  
Scientists and potato breeders are now working on a new propagation method: growing potato crops from hybrid true potato seeds. Nutritional requirements of motherplants have been little investigated.



**Sodium glucoheptonate can replace less degradable Mn chelates** 10



**Tomato cultivars differ in silicon uptake** 33

## Status of plant nutrients

- 4 New plant nutrients on the horizon
- 7 Editorial: A plant nutrient is an element that nourishes a plant

## Arable farming

- 8 High nitrogen availability hampers deep nitrogen uptake in cruciferous catch crop
- 8 Gypsum improves drought tolerance of sunflower
- 8 Fertilisation affects wheat leaf bacterial endophytes
- 8 Iron oxides enhance N-fixation in paddy soil
- 8 Temporary nutrient deficiency exaggerates negative impact of elevated CO<sub>2</sub> on nutrient contents in plants
- 8 Scientific Panel addresses interaction between plant nutrition and biodiversity
- 33 Sorbitol-stabilised potassium silicate helps alleviate potassium deficiency
- 33 Drought-stressed sugar beet profits from foliar-applied silicon

## Potato nutrition

- 9 New cropping system for potatoes
- 9 Publications about potato nutrition research

## Fruits and vegetables

- 33 Sorbitol-stabilised potassium silicate helps alleviate potassium deficiency
- 33 Sorbitol-stabilised potassium silicate increases uptake of foliar-applied boron
- 33 Tomato cultivars differ in silicon uptake

## Fertilisers

- 10 Sodium glucoheptonate can replace less degradable manganese chelates
- 10 Humic substances increase uptake of foliar-applied urea
- 10 Nanosized iron and zinc citrate fertilisers
- 10 Oxygenated fertiliser reduces hypoxic stress
- 14 Biochar-based slow-release ammonium sulphate fertiliser
- 14 Sulphur enhances phosphate release from bone char
- 14 Urea fertiliser from recycled plastic
- 14 Cattle slurry processing controls water-soluble phosphorus fraction
- 14 Urease inhibitor reduces ammonia emission from dairy barns
- 14 Ammonium sulphate rates for water conditioning and foliar fertilisation
- 11 Publications about new, experimental and potential fertiliser formulations

## Plant and soil analytics

- 14 Soil potassium holding capacity

## Silicon

- 33 Silicon interactions with plant nutrients mapped
- 33 Crops can mobilise soil silicon
- 33 Sorbitol-stabilised potassium silicate helps alleviate potassium deficiency
- 33 Sorbitol-stabilised potassium silicate increases uptake of foliar-applied boron
- 33 Drought-stressed sugar beet profits from foliar-applied silicon
- 33 Tomato cultivars differ in silicon uptake
- 34 Recent silicon publications

## Literature

- 9 Publications about potato nutrition research
- 11 Publications about new, experimental and potential fertiliser formulations
- 15 Publications about plant nutrition research
- 34 Recent silicon publications

## Service

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## No calendar of events

*This issue has no Calendar of events. A fully updated calendar will be published in the next issue.*

<b>Publications about plant nutrition research</b>		<b>from page 15</b>	
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Fertiliser companies



Agricultural cooperatives  
(Dutch - with international network of subsidiaries)



Fertiliser research



Liquid fertiliser applicators



Soil services



Mycorrhizae



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Colophon

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