

Plant nutrition courier

The best bits of plant nutrition research

2020-04



Fluid phosphate fertiliser performance in calcareous soil best at a low concentration 10

Nutrient balance reflects nutritional status of potato 5

Automated detection of deficiency in greenhouse-grown crops 8

Fertosphere-pH crucial to plant-availability of banded phosphorus 11

Importance of silicon for legumes underestimated 36



Nutrient balance reflects nutritional status of potato 5

Every potato variety has a unique balance of nutrient concentrations. Canadian scientists are exploring whether such balances can be used to diagnose a crop's nutritional status.



Automated detection of deficiency in greenhouse-grown crops 8

Scientists have developed an automated sensing system to monitor the health of greenhouse-grown crops at sunset using a hyperspectral camera. *Photograph: UC Davis*



Fertosphere-pH crucial to plant-availability of phosphorus 11



Importance of silicon for legumes underestimated 36

Arable farming

- 4 Ammonium triggers formation of lateral roots
- 4 Nitrogen-fixing rhizobacteria differ in greenhouse gas production
- 4 Selenium stimulates iron acquisition in iron-deprived oilseed rape
- 4 Rainfall intensification increases nitrate leaching from tilled but not no-till cropping systems
- 6 Previous-year phosphorus nutrition index indicates phosphorus fertiliser need of maize
- 36 Excess manganese in soybean and sunflower binds to silicon in cell wall
- 36 Silicon mitigates water deficit stress in transplanted pre-sprouted sugarcane seedlings
- 36 Importance of silicon for legumes underestimated

Potato nutrition

- 4 Tuber nitrogen content is risk factor associated with tuber greening
- 5 Nutrient balance reflects nutritional status of potato
- 6 New indices for potato nitrogen status and tuber quality
- 7 Publications about potato nutrition research

Plant and soil analytics

- 4 Tuber nitrogen content is risk factor associated with tuber greening
- 5 Nutrient balance reflects nutritional status of potato
- 6 New indices for potato nitrogen status and tuber quality
- 6 Previous-year phosphorus nutrition index indicates phosphorus fertiliser need of maize
- 6 Determination of P and K in (in)organic fertilisers
- 6 Arginine concentration indicates nitrogen status of peach
- 6 Soil nitrite concentrations indicate hotspots and hot moments of nitrous oxide emissions
- 8 Automated detection of nutrient deficiency in greenhouse-grown crops

Ornamentals, fruits and vegetables

- 8 Automated detection of nutrient deficiency in greenhouse-grown crops
- 8 Foliar-applied manganese reduces green peach aphid fitness in bell pepper
- 8 Selenium enhances accumulation of glucosinolate-related compounds in pak choi
- 8 Iodine spray solution must hit apple fruit for biofortification
- 9 Adjusting nutrient solution allows growth at low pH to limit root rot spread
- 9 Foliar applied urea benefits cider fermentation from nitrogen-poor apple juice

Fertilisers

- 9 Polyhalite less leaching-sensitive than equivalent sulphate salts
- 10 Fluid phosphate fertiliser performance in calcareous soil is best at a low concentration
- 11 Fertosphere-pH crucial to plant-availability of banded phosphorus
- 11 Dual-release granular urea fertiliser
- 11 Glauconite milled into potassium fertiliser
- 11 Adjusting the phosphorus-availability of biochar
- 12 Foliar-applied urease inhibitor starves plant-pathogenic fungi
- 12 Iron(III) phosphate nanofertiliser differently utilised
- 12 Publications about new, experimental and potential fertiliser formulations

Silicon

- 36 Excess manganese in soybean and sunflower binds to silicon in cell wall
- 36 Silicon mitigates water deficit stress in transplanted pre-sprouted sugarcane seedlings
- 36 Importance of silicon for legumes underestimated
- 36 Recent silicon publications

Literature

- 7 Publications about potato nutrition research
- 12 Publications about new, experimental and potential fertiliser formulations
- 15 Publications about plant nutrition research
- 36 Recent silicon publications

Service

- 38 Calendar of events

Publications about plant nutrition research

from page 15

General	15	Potassium	29
Biofortification	15	Calcium	30
Greenhouse gas emission	15	Lime / pH	31
Mapping, sensing, sampling and analytics	16	Magnesium	31
Ammonia and urea fabrication processes	14	Sulphur	32
Application technology	18	Boron	32
Foliar fertilisation	18	Chloride	32
Chelates	19	Copper	32
Organic fertilisers and industrial wastes (selection)	19	Iron	33
Green manure / cover crops	20	Manganese	33
Biochar	21	Molybdenum	34
Humic acids	21	Zinc	34
Nano-fertilisers	21	Aluminium	34
Nitrification and urease inhibitors	22	Iodine	34
Specific release	22	Nickel	34
Nitrogen	23	Selenium	35
Phosphorus	28	Rhizobia, mycorrhiza etc.	35

Facelift for website Plant nutrition *courier*

The website of the Plant nutrition *courier* has been redesigned. This makes the website more suitable for mobile devices.

The screenshot displays the website of the Plant nutrition *courier*. The layout features a prominent green sidebar on the left with navigation links: WELCOME, FREE ISSUE, SUBSCRIPTION, SINGLE ISSUES, REPORTS, and MORE. Below these are links for CATEGORIES, SUBSCRIPTION, SUBSCRIPTION RENEWED, SINGLE ISSUES, and REPORTS. The main content area is dominated by a large, high-quality image of a tractor in a field. Below this image, the text reads "THE BEST BITS OF PLANT NUTRITION RESEARCH RIGHT ON YOUR DESK". A paragraph follows, stating: "The best bits of plant nutrition research right on your desk - so is the Plant nutrition courier best characterized. Each issue of this digital bimonthly newsletter has a feature about plant nutrition related research and short news items related to both plant nutrition and plant and soil analysis. Furthermore this special interest newsletter reports about innovative plant nutrition products and novel fertiliser formulations. Last but not least the Plant nutrition courier has a column with hyperlinks to relevant publications." Below this, there is a section for "Beneficial nutrients news" and a list of "Advertisers in Plant nutrition courier magazine" including Agrifirm, BIRON, DUPONT, Micromix, Nxt, Nxt, PRC, and SpectraCrop. On the right side of the main content area, there is a small thumbnail image of the Plant nutrition courier magazine cover with the headline "Ammonium nitrate fertilisation increases manganese availability in calcareous soils".

Fertiliser companies



Agricultural cooperatives
(Dutch - with international network of subsidiaries)



Liquid fertiliser applicators



Fertiliser research



Trial equipment



Plant and soil analysis
devices and tools



Soil services



Biostimulants



Mycorrhizae



How to advertise

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Colophon

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