

Plant nutrition courier

The best bits of plant nutrition research

2023-05



Pollinators need sulphur-sufficient crops 4

Breeding maize with high nitrification inhibitory capacity 6

Sulphur-containing signalling molecule stimulates nitrogen fixation and crop growth 7

Novel fertiliser coatings minimize caking 10

Adjuvants improve iodine biofortification 15



Pollinators need sulphur-sufficient crops 4

Flowers of sulphur-deficient crucifers are not attractive to bees. Sulphur-deficiency affects also the floral displays of other plant species as well as the morphology and chemical profile of pollen.



Breeding maize with high nitrification inhibitory capacity 6

Maize breeders are preparing to breed varieties with a high biological nitrification inhibitory capacity.



Signalling molecule stimulates nitrogen fixation and crop growth 7



Novel fertiliser coatings minimize caking 10

Sulphur and pollinators

- 4 Pollinators need sulphur-sufficient crops

Arable farming

- 5 Soil bacteria can dissolve calcite for healthy peanut growth
- 5 Liquid digestate has short-term nematicidal effect
- 5 Soil-applied potassium silicate reduces aphid numbers in resistant wheat cultivar
- 6 Breeding maize with high nitrification inhibitory capacity
- 6 Plants enhance nitrogen mineralisation
- 6 Soil-applied glycerol can reduce nitrate leaching
- 6 Vegetable oil-coated urea can alleviate salinity stress
- 7 Sulphur-containing signalling molecule stimulates nitrogen fixation and crop growth
- 7 Sodium fulfils potassium needs of sugar beet on saline soil
- 7 Molybdenum increases phosphate uptake in soybean
- 8 Phosphate dipping improves rice yield on low-available phosphate soils

Potato nutrition

- 8 Three tools to assess the phosphorus status of potato compared
- 8 Publications about potato nutrition research

Fruits, vegetables and ornamentals

- 9 Cold plasma treatment reduces micronutrient solubility of nutrient solutions
- 9 Container substrates are a source of micronutrients
- 9 Calcium can enhance lenticels breakdown in apples

Plant and soil analytics

- 8 Three tools to assess the phosphorus status of potato compared
- 9 Modified method for phosphate desorption assessment
- 9 Solar-induced chlorophyll fluorescence reflects a crop's nitrogen status

Fertilisers

- 10 Hydrophobic coating minimizes fertiliser caking
- 10 Novel water-based anti-caking coatings
- 10 Acid coating increases zinc availability in granular phosphate fertiliser
- 10 Micronutrients-containing resin coating for urea
- 11 Water-soluble ammonium polyphosphate for drip irrigation with hard water
- 11 Lignosulphonate-based iron complex less sensitive to calcium than Fe-EDDHA
- 11 Ball-milled potassium feldspar as carrier for potassium solubilising bacteria
- 11 Watercress contains biological urease inhibitor
- 11 Water-soluble urease inhibitors from lignocellulose pyrolysis
- 15 Adjuvants improve iodine biofortification of wheat
- 12 Publications about new, experimental and potential fertiliser formulations

Silicon

- 5 Soil-applied potassium silicate reduces aphid numbers in resistant wheat cultivar

Literature

- 8 Publications about potato nutrition research
- 12 Publications about new, experimental and potential fertiliser formulations
- 16 Publications about plant nutrition research

Service

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Muriate of potash coated with 1% synthetic wax combined with micronutrients as roughening compounds (boron, copper, manganese and zinc).

Picture: Fertiliser Technology Research Centre, University of Adelaide (Australia)

Publications about plant nutrition research

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Colophon

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