



FACTS Horticulture Assessment Theme 01 June 2018/ 31 May 2019

Prediction and diagnosis of nutrient deficiencies (visual symptoms, sampling and analysis of plants, growing media and water)

- Visual symptoms of nutrient deficiencies
 - . Nitrogen
 - . Phosphorus
 - . Potassium
 - . Sulphur
 - . Calcium
 - . Magnesium
 - . Iron
 - . Manganese
- Pros and cons of growing media and plant tissue testing
- Sampling growing media
 - . Sampling equipment
 - . Method of taking a sample: depth, number of sub-samples, obtaining a representative sample from within a bag or container, obtaining a representative sample from a collection of bags or containers, frequency of sampling
 - . Interpretation of growing media analysis report: dry matter, bulk density, pH, conductivity, nitrate-N and ammonium-N, chloride, sulphate, potassium, phosphorus, magnesium, calcium, sodium, iron, manganese, zinc, copper and boron
- Plant tissue sampling
 - . Method for taking a sample: part of plant taken, need to avoid contamination
 - . Interpretation of tissue analysis reports: likely deficiency concentrations
- Sampling water for hydroponic systems
 - . What to test for and interpretation of report: pH, conductivity, phosphorus, potassium, calcium, magnesium, sodium, chloride, nitrate nitrogen, sulphate, copper, manganese, zinc, iron, boron, bicarbonate and carbonate.