

# The importance of plant nutrient analysis

Monitoring and analysing potato nutrient levels are essential for a crop's success. Rapid plant nutrient analysis presents a valuable tool for producers battling the growing season.

Nutrient levels in potato plants are critical for the success of a crop. The correct amount of both macro and micro nutrients needs to be available at the right time for each crop to maximise yield and quality, and provide the greatest resistance to pests and diseases. Soil testing alone is often not enough to guarantee a successful crop as a plant's uptake of nutrients varies immensely and can be affected by several variables. Rapid plant nutrient analysis can allow for the examination and identification of nutrient related deficiencies and trends. This is performed through the testing of plant petioles (stems), referred to as a *Nu-Test*.

Through the analysis, 15 key nutrient levels of samples can be identified. The sap is extracted using precision hydraulic presses, which gently extracts sap from the sap stream without breaking down cell structures. The sap is then

filtered, diluted and analysed using an inductively coupled plasma spectroscopy (ICP) to measure the inorganic nutrients (such as Phosphorus, Calcium, Potassium, Zinc, Boron), and a flow injection analyser (FIA) to measure nitrogen, chloride and

course of a season in order to identify the nutrient trends of a crop.

"Plant nutrient testing is a quick, accurate and inexpensive way to measure the key production components of a crop," he said.

rapid nutrient testing." Mr Hicks said when sampling for nutrient uptake (sap) analysis, growers should take actively growing parts from a random selection of plants from a representative area of the crop, or from plants that are representative of the crop. For *NU-test* results to be meaningful, a consistent sampling technique is important.

With results e-mailed to a nominated recipient - including growers, agronomists or other agents - rapid nutrient testing has presented itself as an avenue through which increased productivity and minimal wastage could be achieved.

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Technical Manager at AgVita Analytical, Darren Hicks, said that growers often take several samples to be analysed over the

"Growers could potentially save money due to more precise applications of fertiliser or make money due to increased yields if they utilise the results from the

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