



# PLANT RESPONSE

## What is Plant Response<sup>®</sup> ?

AgVita Analytical has a well-earned reputation for innovative, reliable and rapid accredited soil and plant analysis. We have pioneered the Mehlich-3 soil test in Australia (expressSoil<sup>®</sup>) and have offered fresh plant nutrient analysis (NU-test<sup>®</sup>) across a wide variety of crop types and regions over many years.

There are, however, a large number of growers and advisors who also require the commonly accepted method of plant analysis known as 'dry tissue' or 'dry ash'. This method has advantages over petiole tests when, for example, crop nutrient removal rates need to be known or post-harvest analysis of nutrient uptake over the life of the crop is important.

AgVita has heard time and again of the frustration people feel as they wait too long for their plant test results to be reported. In response to this, AgVita can now offer this method of plant analysis, with the turn-around times and service you expect from Agvita.

**This is Plant Response<sup>®</sup>!**

## Why submit plant samples for Plant Response<sup>®</sup> tissue analysis?

Dry ash plant analysis can be used as both a monitoring tool (to routinely monitor plant nutrients to help sustain optimum levels to avoid nutritional disorders and therefore achieve maximum marketable yield) and as a diagnostic test (to identify nutrient deficiencies, toxicities or imbalances that affect crop health).

Plant tests should be considered as an essential tool for all crops –a soil test will indicate what soil nutrients are potentially *available* to the crop, but it is only a plant test that shows what nutrients the crop has actually *taken up*.

## Which components make up the test?

Three combinations of analytes in the **Plant Response<sup>®</sup>** suite have been designed to satisfy the most commonly used plant tissue test combinations from all parts of Australia, and for all major farming enterprises:

### **TEST PR-71: N-P-K check:**

Nitrogen – Phosphorus – Potassium only

### **TEST PR-72: Basic plant test:**

Nitrogen, P, K, Ca, Mg, Zn, B

### **TEST PR-73: Complete test:**

Nitrogen, NO<sub>3</sub>, P, K, Ca, Mg, Na, S, B, Cu, Zn, Mn, Fe, Al, Cl

## How is data reported?

Analytical results are reported in a simple to use reporting template that compares results against established benchmarks (e.g. Reuters & Robinson, 1997 plus other sources) and also lists raw data. There is also a convenient section allowing Advisors or Consultants to add their comments, interpretations & recommendations. Please contact AgVita if you would like us to send an example of this reporting format to you.

**Plant Response<sup>®</sup>** results will be reported within 4 working days of samples arriving at our Laboratory..... every time, every sample regardless of the time of year. We guarantee it!



## Sampling information

Plant Response analysis has a well-defined set of sample collection & handling criteria to ensure consistency between samples. Please contact AgVita for detailed information on correct sampling techniques, suggested times, correct plant parts, minimum volume/weights required and sample handling procedures once the Plant Response© sample is collected. Remember, the quality of results you receive is only as good as the quality of sample that we receive.

## When to sample?

- Time of day is less critical for this technique, but we recommend sampling between 8am and midday (up to mid-morning on hot days)
- Avoid sampling immediately after spraying.
- Do not sample plants affected by environmental stress (e.g. extreme heat/cold or moisture stress).

## Quantities required

- There are specific quantities required depending on plant type – please refer to the Sampling Guidelines on our website
- Do not collect samples from different varieties or crop ages – sample separately
- Do not collect different plant parts from the same crop to make up quantities.

## Representative sampling tips

- Standard techniques should be applied to access crops randomly in paddocks (e.g. a zig-zag or W-pattern)
- When sampling fruit or large plants/leaves, a sufficient number of samples must be collected to alleviate bias due to individual units.
- Avoid diseased or stunted plants, poorly performing parts of paddocks, or crops clearly affected by disease or pests.
- Avoid contamination of samples due to residues on hands or bags – consider wearing disposable gloves when sampling, and use clean bags.

## Correct plant parts

- Please collect the specific plant parts by crop type (at specific growth stages) recommended for various crops on our Sampling Guidelines fact sheet at [www.agvita.com.au](http://www.agvita.com.au)
- For diagnostic analysis, consider collecting comparative samples from good verse bad portions of the crop.
- Avoid sampling crops adversely affected by conditions mentioned above.

## Postage and packaging tips

- Please use **paper** bags when collecting and posting. Samples need to be double-bagged prior to sending to AgVita in a sealed outer plastic bag, then in the post pack.
- Keep samples cool and away from direct sunlight once collected.
- Please complete a Customer Reference Form (CRF) and includes with all samples.

Send the samples via overnight express to:

**AgVita Analytical**

**PO Box 188, Devonport, TAS 7310**

**Ph: (03) 6420 9600**

**Fax: (03) 6427 0230**

**Email: [info@agvita.com.au](mailto:info@agvita.com.au)**

For more information and to obtain a sample label visit:

**[www.agvita.com.au](http://www.agvita.com.au)**

Member of ASPAC,  
Australasian Soil and  
Plant Analysis Council

