



Plant Tissue Testing Instructions Broadacre

Why Sample?

Plant tissue analysis is usually used for one of the two following reasons:

- ✔ Monitoring or Routine Sampling – to determine how the current nutrition strategy is performing and if there are any hidden deficiencies.
- ✔ Diagnostic Sampling – to help determine why a crop area is performing poorly or exceptionally well.

When to Sample

The time of year, growth stage, and even time of day can have an effect on the results of tissue analysis and our ability to draw meaningful conclusions from the data. Sample at a time appropriate to your crop - details follow.

Getting the most from Tissue Testing

Tissue tests give us a snapshot in time of what nutrients are present in the plant part sampled. A soil sample provides an indication of how much of each nutrient is likely to be available to the plant from soil, but other factors can influence how much of that nutrient is taken up (e.g. root pruning by pests or herbicides, very high or low pH soil, poor soil structure, nutrient interactions, and moisture availability). Using soil and tissue tests in conjunction gives a better indication of the overall picture. Predicta B tests may also be beneficial where root disease is suspected.

Site Selection – Diagnosis vs Monitoring

Monitoring

When sampling for routine monitoring of crops, go back to your soil sampling sites where possible. If you don't have pre-existing sites to sample, the same rules apply for choosing tissue testing sites as soil testing.

- ✔ Choose a uniform area of crop, representative of that soil type
- ✔ Sample multiple sites in one paddock
- ✔ Avoid headlands, sheep camps, outside runs
- ✔ Paired sampling of a nutrient rich strip can be very beneficial

Diagnostic

When sampling for diagnostic purposes we want to compare an area of poor growth to areas of better growth to ascertain if the poor growth is due to a nutrient deficiency, toxicity, or some other cause.

- ✔ Take one sample from the poor area of growth
- ✔ Take another sample from a nearby area with relatively better growth
- ✔ Also ensure you are looking for other signs of what may have caused the poor growth
 - Straight lines may indicate herbicide, or seeding fertiliser involvement
 - Wavy patterns across the paddock may be related to spreading
 - Check roots for signs of root disease &/or do a Predicta B test