

# NUlogic Fact Sheet

## Products and Services - Soil Analysis



### Soil Testing

Fertilisers can comprise up to 30 percent of farm expenditure so it is important to use the right product and the right amount in the right place on the farm.

Soil testing provides important information on which to base fertiliser decisions. A fertiliser programme based on regular soil sampling will help to eliminate any costly production losses due to nutrient limitations or wastage where fertiliser applications are not required. Testing over time, combined with testing across many sites, builds a picture of where nutrient imbalances need to be addressed and where fertiliser and soil ameliorants will be most cost effective.

### NUlogic Soil Analysis for Crops and Pastures

This kit is designed to measure the fundamental aspects of soil fertility including the levels of plant available nutrients to determine the fertiliser requirements for crops and pastures (including horticultural crops). The kit includes analysis for nitrate nitrogen, ammonium nitrogen, phosphorus, potassium, sulfur, organic carbon, phosphorus buffering index, salt and pH within six soil samples.

For customers purchasing CSBP fertilisers, accredited NU logic Advisers interpret the soil test results and provide comprehensive fertiliser recommendations.

Recommendations from CSBP NU logic Soil Analysis are supported by over 30 years of local trial data and are driven by economic parameters affecting farm businesses.

**Nitrate nitrogen** is a measure of the readily available but potentially leachable nitrogen supply to the plant.

**Ammonium nitrogen** (another reserve of nitrogen in the soil) may be taken up directly by plants, or be converted to the nitrate form.

The **phosphorus measure** is used to calculate the soil phosphorus status and fertiliser phosphorus recommendations.

The **potassium measure** is used to determine soil potassium status and potassium requirements.

The **sulphur measure** is used to determine soil sulphur status.

**Organic carbon** provides an indication of the soil's organic matter content and soil health. This measure, in conjunction with paddock history information over the previous two years, influences nitrogen status and nitrogen recommendations.

**Phosphate Buffering Index (PBI)** is a measure of the extent to which phosphorus is immobilised or fixed in the soil. It is used to modify the phosphorus status and recommendations.

**Soil pH** affects the availability of many nutrients to plants especially phosphorus, and can directly limit root and plant growth. pH is a measure of the acidity or alkalinity of the soil. It is used to determine lime requirements.

Excessive salt levels can affect plant germination and growth.

### Benefits

- 1 Assists fertiliser decisions through objective estimates of soil nutrient availability;
- 2 Considers likely response to fertiliser and anticipated returns to optimise nutrient application rates;
- 3 Assesses overall soil 'health' (soil pH, salinity and organic carbon) and lime or gypsum requirements;
- 4 Monitors changes in soil fertility over time;
- 5 Defines nutritional reasons for variation in plant growth;
- 6 Complemented by NU logic Plant Analysis for Crops & Pastures.

### Frequency

Regular sampling of paddocks is recommended to monitor changes in soil fertility over time. Ideally, this should be every three to four years in broadacre situations.

### Other combinations

A number of other additional tests can be requested and other combinations of soil analyses are available upon request. Contact the CSBP Soil and Plant Analysis Laboratory (phone-(08) 9434 4600).

